



# भारत का राजपत्र

## The Gazette of India

प्राधिकार से प्रकाशित  
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No. 28] NEW DELHI, SATURDAY, JULY 14, 1984 (ASADHA 23, 1906)

इस भाग में भिन्न पृष्ठ संख्या दी जाती है, जिससे कि इस वर्ग संबंधित दो रूप में रखा जा सके।  
(Separate paging is given to this Part in order that it may be filed as a separate compilation)

### भाग III—खण्ड 2

#### [PART III—SECTION 2]

पेटेन्ट कार्यालय द्वारा जारी की गई पेटेन्टों और डिजाइनों से सम्बन्धित अधिसूचनाएं और नोटिस  
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Calcutta, the 14th July 1984

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**APPLICATION FOR PATENTS FILED AT THE HEAD OFFICE 214, ACHARYA JAGADISH BOSE ROAD, CALCUTTA-700 017**

The dates shown in crescent brackets are the dates claimed under Section 135, of the Act.

2nd June, 1984

383|Cal|84. Alfa-Laval Aktiebolag. Outlet Arrangement for a Centrifugal Separator.

4th June, 1984

384|Cal|84. Oronzio De Nora S.A. Method for Electrically connecting non corrodible anodes to the corrodible core of a power supply cable and the flexible anode assembly produced therefrom.

385|Cal|84. Laboratoires Boiron. Apparatus for the manufacture of Globules, Granules, small balls or the like from a material such as sugar. (29th July, 1983).

386|Cal|84. Voest-Alpine Aktiengesellschaft. Device for controlling the position of a tunelling Machine.

7th June, 1984

387|Cal|84. The Jacobs Manufacturing Company. An Engine Braking System.

8th June, 1984

388|Cal|84. International Isobouw Sales Office N.V. Method for manufacturing light-weight shaped concrete Articles, such as block-shaped building elements suitable for building completely heat-insulated buildings.

389|Cal|84. Rodney Ruskings and Rafel Sacks. Process for making drip irrigation lines.

390|Cal|84. Institut Cerac S.A. An arrangement in Static Converters.

391|Cal|84. Siemens Aktiengesellschaft. Method for manufacturing Reaction resin moulded materials.

392|Cal|84. Siemens Aktiengesellschaft. Thermosetting Reaction resin mixtures.

393|Cal|84. Siemens Aktiengesellschaft. Thermosetting Reaction resin mixtures.

11th June 1984

394|Cal|84. Dr. Asoka K. Misra and the Registrar, Indian Institute of Technology, Kharagpur-721302. Solidification and casting of metals and alloys under the influence of applied electrical potential.

395|Cal|84. Kraftwerk Union Aktiengesellschaft. Power station including an integrated coal gasification plant. [Addition to No. 322|Cal|84].

396|Cal|84. Envirotech Corporation. Liquid solid separation utilizing pressure rolls covered with elastomeric layers.

[Divisional date 8th February, 1982].

The 12th June 1984

397|Cal|84. Johnson & Johnson Products Inc. Pressure Sensitive Adhesive.

398|Cal|84. Engelhard Corporation. Porous Mullite.

399|Cal|84. Kabushiki Kaisha Meidensha. Metal Enclosed Switchgear.

The 13th June 1984

400|Cal|84. John Wyeth & Brother Limited. Fat Compositions. (24th June, 1983).

401|Cal|84. W. & A. Bates Limited. Improvements In Machinery. (29th June, 1983).

402|Cal|84. (1) Siegfried Harcuba, (2) Theodor Peter Harcuba, (3) Interverte Anstalt. Process and Apparatus for Producing Glass.

403|Cal|84. Theo Schroders. A Sealing Strip and a Method of using the same.

404|Cal|84. Interscents N.V.A. Spray-Discharge Device for a Deformable Container.

**APPLICATION FOR PATENTS FILED AT THE PATENT OFFICE BRANCH, MUNICIPAL MARKET BUILDING, 11RD FLOOR, KAROL BAGH, NEW DELHI-5**

The 17th May, 1984

408|Del|84. Bal Krishan Gupta. "Pressure regulator for gas cylinders".

409|Del|84. Maliakal Paul George & Jose George Mallakal. "A set for learning computer principles with enlarged logic and digital modules having electromagnetic relays, on a large functional assembly board".

410|Del|84. Burns & McDonnell Engineering Company Inc., "Clarification of fluids".

411|Del|84. The Gillette Company, "Shaving implement". [Divisional date September 25, 1981].

412|Del|84. The Bendix Corporation, "Drive mechanism".

413|Del|84. Asarco Incorporated, "Method for the electrolytic refining of copper".

The 18th May, 1984

414|Del|84. Super Parts Private Limited, "An improved horizontal mixing tube burner".

415|Del|84. Kenrich Petrochemicals, Inc., "Adducts of tetra-substituted pyrophosphato titanates with phosphites and/or amines". [Divisional date August 19, 1980].

416|Del|84. Commander Appliances, "A baking appliance".

417|Del|84. The Director, All India Institute of Medical Science, "A transferring device".

418|Del|84. Oil and Natural Gas Commission, "A printer for use with a photoinclinometer".

419|Del|84. Oil and Natural Gas Commission, "An electronic module for use in a photoinclinometer".

420|Del|84. Oil and Natural Gas Commission, "Inclinometer".

421|Del|84. Oil and Natural Gas Commission, "Recording mechanism for use with a photoinclinometer".

422|Del|84. Oil and Natural Gas Commission, "The inclination and azimuth module for use in a photoinclinometer".

The 19th May, 1984

423|Del|84. Energy Conversion Devices, Inc., "Barrier layer for photovoltaic devices".

424|Del|84. Union Carbide Corporation. "High strength steel and gas storage cylinder manufactured thereof".

The 21st May, 1984

425|Del|84. Brush Switchgear Limited, "Gas blast interrupters". [January 1, 1981].

426|Del|84. Bergwerksverband GmbH., "Process and device for cleaning of gas mixtures".

427|Del|84. Schering Aktiengesellschaft, "Substituted sulfonylureas processes for the manufacture of these compounds as well as agents that contain them and have a herbicidal and plant growth regulating effect".

The 22nd May, 1984

428|Del|84. Latviiskiy Gosudarstvenny Universitet Imeni petra stuchki, "Method for preparing 4-keto-9-methylphenazine".

429|Del|84. George W. Vosper, "Drain trap".

430|Del|84. Vikas Engineering Corporation, "An apparatus for the manufacture of a double ply rope".

The 23rd May, 1984

431|Del|84. Rajesh Khosla, "Electric switch and socket outlet box".

432|Del|84. Dyno Industries A.S., "Method for providing density reduction and increased initiating sensitivity in emulsion explosives".

433|Del|84. Borsing GmbH, "Support of a horizontal, thermally loadable container". (Convention date November 17, 1983).

The 24th May, 1984

434|Del|84. Gerald Anthony John Francis McKeown, "Keyboard". (May 26, 1983).

The 25th May, 1984

435|Del|84. Redland Technology Ltd., "Improvements in or relating to boards". (June 2, 1983).

The 28th May, 1984

436|Del|84. Niky Tasha India Pvt. Ltd., "A wick for use with a kerosens wick stove".

437|Del|84. Niky Tasha India Pvt. Ltd., "A Kerosene Wick Stove".

438|Del|84. Otsuka Pharmaceutical Co., Ltd., "Malaria Associated Antigen and Preparing Process Thereof".

439|Del|84. Texas Eastern Engineering, Ltd., "Slug-Catching method and apparatus".

The 29th May, 1984

440|Del|84. Inder Sain Khuller, "An Improved process for the preparation of Tiles and Multipurpose Tiles made therefrom".

441|Del|84. Klemens Kalverkamp, "Method and device for communication of vegetable matter".

The 30th May, 1984

442|Del|84. Charles Farmer Jr., "Oil Refining Assembly".

443|Del|84. CLE, "Improvements in and relating to the heat treatment of a pulverulent solid material".

The 31st May, 1984

444|Del|84. Peck India, "An overhead storage tank".

445|Del|84. Peck India, "A water tap entrainment means".

446|Del|84. Faboon Incorporated "Method of separating solid and liquid material in a slurry".

447|Del|84. Pfizer Inc., "Hypoglycemic 5-substituted oxazolidine-2, 4-diones".

[Divisional date June 9, 1981].

448|Del|84. Pfizer Inc., "Hypoglycemic 5-substituted oxazolidine-2, 4-diones". (Divisional date June 9, 1981).

449|Del|84. Pfizer Inc., "Hypoglycemic 5-substituted oxazolidine-2, 4-diones". (Divisional date June 9, 1981).

450|Del|84. Compagnie Industrielle Des Telecommunications CIT-Alcatel, "Externally synchronized timebase".

APPLICATIONS FOR PATENTS FILED AT THE  
PATENT OFFICE BRANCH, 61, WALLAJAH ROAD,  
MADRAS-600 002

The 21st May, 1984

369|Mas|84. Richter Gedeon Vegyeszeti Gyar Rt. A process for the preparation of new bicyclic compounds. (Divisional to Patent Application No. 832|CAL|82).

370|Mas|84. The British Petroleum Company p.l.c. Beneficiation of carbonaceous fuels. (May 21, 1983).

The 22nd May, 1984

371|Mas|84. Kaptan Aps. A solar energy powered system for the production of cold.

The 23rd May, 1984

372|Mas|84. Bandfabrikk Hevatex B.V. Light reflecting safety belt.

373|Mas|84. The British Petroleum Company p.l.c.—Diamond separation. (May 24, 1983).

The 24th May, 1984

374|Mas|84. V. V. Pavithran, V. Ravindraprasad, V. V. Jayaram, V. V. Babu, V. V. Haridas, V. V. Pyerilal, K. P. Kumari, K. Girija and V. V. Santhosh Kumar. An improved method of obtaining uniform and durable edge finish for coir brush mats and the like. (Additional to Patent Application No. 164|Mas|83).

375|Mas|84. Garrett Michael Sainsbury. Focussing solar collector.

376|Mas|84. The Texas A&M University System. Method for producing a recombinant baculovirus expression vector.

377|Mas|84. Reckitt & Colman Products Limited. Applicator. (May 26, 1983).

378|Mas|84. Mallinckrodt, Inc. Preparation of trimethoxybenzoate esters and trimethoxybenzoic acid.

The 25th May, 1984

379|Mas|84. P. Kandasubbu. Composite reinforced cement concrete frames for doors using flats and wooden pegs.

380|Mas|84. Lucas Industries Public Limited. Starter motors. (The 27th May, 1983).

381|Mas|84. Pont-A-Mousson S.A.—Device for handling and positioning a socket core for a machine for the centrifugal casting of cast-iron pipes comprising a socket.

382|Mas|84. Institute Po Technicheskia Kibennetika I Robotika. Planetary wise-feeding device.

383|Mas|84. Maschinenfabrik Rieter AG. Device for transporting cans.

384|Mas|84. Maschinenfabrik Rieter AG. Device for lifting a wound package.

385|Mas|84. Maschinenfabrik Rieter AG. Drawing frame and use thereof.

386|Mas|84. Maschinenfabrik Rieter AG. Apparatus for opening textile fibre bales.

387|Mas|84. Maschinenfabrik Rieter AG. Method and apparatus for false twist spinning.

388|Mas|84. PSC Freyssinet Limited. Improvements in tendons for post tensioned pre-stressed concrete structures. (May 25, 1983).

The 26th May, 1984

389|Mas|84. Sinclair Research Limited. Magnetic tape recording and reproducing apparatus. (The 27th May, 1983).

390|Mas|84. Sinclair Research Limited. Improved continuous loop tape cassette. (May 26, 1983).

The 28th May, 1984

391|Mas|84. S. Mitchell Harman. Means and method of administering medicinals.

392|Mas|84. Surya Gears. A single motor multispeed drive for ring frames.

The 29th May, 1984

393|Mas|84. The Dow Chemical Company. Preparation and use of electrodes.

394|Mas|84. Conoco Inc. A method of separating refuse from coal.

395|Mas|84. Stauffer Chemical Company. Process for the preparation of N-Arylhalopyrrolidones.

396|Mas|84. Jonathan C. Mott. Racquet with improved string anchorage.

397|Mas|84. Nitto Boseki Co. Ltd. and Paramount Glass Manufacturing Co. Ltd. Method of forming fibres from glass and apparatus therefor.

The 30th May, 1984

398|Mas|84. Diamond Shamrock Chemicals Company. Therapeutic device.

399|Mas|84. Vickers Australia Limited. Abrasion resistant materials. (May 30, 1983).

The 31st May, 1984

400|Mas|84. Robert Bosch GmbH. Centrifugal speed governor for an internal combustion engine.

The 1st June, 1984

401|Mas|84. Messr Griesheim GMBH. Gas laser, particularly fast axial flow gas transport laser.

402|Mas|84. Alfred Reader & Company Limited. A ball and manufacture therefor. (October 12, 1983).

The 2nd June, 1984

403|Mas|84. T. P. George. A flushing cistern.

404|Mas|84. K. M. Pillai. A process for the preparation of a formulation for the treatment of brown bant in hevea.

405|Mas|84. B. Balakrishnan. A device for preventing theft of automobiles.

406|Mas|84. R.C.S.C.P.C. Ayyathurai. A solar wind energy generator.

407|Mas|84. Industries Development Corporation. Vehicle drive system.

408|Mas|84. Dennison Manufacturing Co. Limited. Methods of manufacturing assemblages of fasteners. (June 28, 1983).

#### ALTERATION OF DATE

153411. (369|Cal|82). Ante dated to 17th March, 1979.

153458. (642|Cal|82). Ante dated to 6th March, 1979.

#### COMPLETE SPECIFICATION ACCEPTED

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CLASS : 32F2c & 39 C.

153372.

Int. Class : C07c 127|00 & C01c 1|00.

#### "A THERMALLY INTEGRATED METHOD FOR THE PREPARATION OF AMMONIA AND UREA".

Applicant : TOYO ENGINEERING CORPORATION, A JAPANESE CHEMICAL CORPORATION OF 2-5, KASUMIGASEKI, 3-CHOME, CHIYODA-KU, TOKYO, JAPAN.

Inventors : KOZO OHSAKI AND KEIZO KONOKI.

Application for Patent No. 850|DEI|79 filed on 27th November, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents, Rule, 1972) Patent Office Branch, New Delhi-5.

(11 claims)

A thermally integrated method for the preparation of ammonia and urea which comprises subjecting a carbon-containing material such as hydrocarbon to steam reforming and/or partial oxidation to produce a crude synthesis gas composed of hydrogen, carbon monoxide and carbon dioxide, treating said synthesis gas to convert exothermically the carbon monoxide content thereof to carbon dioxide and produce synthesis gas containing substantially carbon dioxide and hydrogen, cooling said substantially carbon dioxide-hydrogen containing synthesis gas and recovering heat released from the cooled gas in a manner such as herein described, treating the cooled synthesis gas in order to remove therefrom carbon dioxide

which is removed separately, reacting the treated gas now consisting of substantially only hydrogen with nitrogen to produce ammonia and, if desired, reacting at least a part of said ammonia with the recovered carbon dioxide to produce a reaction solution containing ammonium carbamate and urea and recovering urea from said solution.

(Complete specification 22 pages. Drawings 2 sheets).

CLASS : 150 F. 153373.

Int. Class : F 16 I 17/00.

"LARGE DIAMETER PIPE JOINT WITH MEANS FOR DISTRIBUTING TENSILE FORCES".

Applicant : PONT-A-MOUSSON S.A., A FRENCH COMPANY, OF 91 AVENUE DE LA LIBERATION, F-54000 NANCY, FRANCE.

Inventors : MICHEL PIERREL AND JEAN PIERRE VITEL.

Application for Patent No. 851/DEL/79 filed on 27th November, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

(11 claim)

A joint between a male end of one pipe and a mouth end of a second pipe, where there is a possibility of the two pipes not being perfectly aligned with each other, comprising: respective opposite support means on said male end and said mouth end, bracing means arranged between said opposite support means for distributing tensile forces over the complete periphery of the joint and comprising an incompressible mass of an initially fluid filler material and wherein the support means of the mouth end is defined by a flange inside said mouth and that of the male end is defined by a split guard ring enclosing said male end and bearing against a radial shoulder of said end, said bracing means including annular components disposed between the two support means to define a space closed on all sides in an impermeable manner relative to said filler material and filled with said filler material.

(Complete specification 17 pages. Drawings 3 sheets).

CLASS : 42 A(1) & 42 C. 153374.

Int. Class : A 24 f 13/06.

"A PROCESS FOR THE PREPARATION OF A FILTER MATERIAL FOR REMOVING HARMFUL SUBSTANCE FROM A GASEOUS MEDIUM".

Applicant : MATTI JUHANI SIREN, OF GARTENS-TRASSE 15, CH-8002 ZURICH, SWITZERLAND, A FINNISH CITIZEN.

Inventor : MATTI JUHANI SIREN.

Application for Patent No. 854/DEL/79 filed on 28th November, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi.

(6 claims)

A process for the preparation of a filter material for removing at least one harmful substance from a gaseous medium passing through said filter, characterized by cross-linking cellulose, starch or dextran with a bifunctional cross-linking agent of the kind such as herein described to produce a cross-linked carbohydrate polymer which is swellable to a predetermined degree and has the form of a microporous network having through-passing open pores defined by the cross-linked carbohydrate molecule structures, and uniformly distributing in said polymer, prior to during or after the cross-linking operation, at least one agent of the kind such as herein described capable of removing said substance in a selective manner from the medium passing through said filter.

(Complete specification 20 pages).

CLASS : 104J

153375.

Int. Class : C08d 13/00.

"A METHOD OF FORMING A COMPOSITE OF URETHANE AND RUBBER".

Applicant : SYNAIR CORPORATION, a corporation organised under the laws of the State of California, United States of America, of 2003 Amnicola Highway, Chattanooga, Tennessee 37406, United States of America.

Inventors : EDWARD NICHOLAS GOMBERG AND DANA WILLIAM SOMESLA.

Application for Patent No. 860/DEL/79 filed on 29th November, 1979.

Appropriate Office for opposition proceedings (Rule 4, Patents Rule, 1972), Patent Office Branch, New Delhi-110005.

(7 Claims)

A method of forming a composite of urethane and rubber, comprising the steps of:

- cleaning a cured rubber substrate surface;
- coating the cleaned substrate surface with a liquid cyanoacrylate adhesive;
- coating the substrate surface with uncured urethane while the adhesive is still wet; and
- curing the urethane by known methods; wherein the uncured urethane is a liquid or wet paste-like urethane.

(Complete Specification 11 pages).

CLASS : 40H

153376.

Int. Class : B01 d 53/02.

"PROCESS FOR THE RECOVERY OF HYDROGEN AND NITROGEN FROM GAS MIXTURES".

Applicant : UNION CARBIDE CORPORATION, manufacturers, a corporation organized and existing under the laws of the State of New York, United States of America, located at 270 Park Avenue, New York, State of New York 10017, United States of America.

Inventor : KISHORE JOSRAJ DOSHI.

Application for Patent No. 862/DEL/79 filed on 29th November, 1979.

Appropriate Office for opposition proceedings (Rule 4, Patents Rule, 1972), Patent Office Branch, New Delhi-110006.

(9 Claims)

A process for the recovery of hydrogen and nitrogen from gas mixtures comprising 1 to 7 volume percent ammonia, 3 to 8 volume percent argon, 6 to 12 volume percent methane, 16 to 25 volume percent nitrogen and the balance hydrogen by selectively adsorbing methane in an adsorption zone at a higher pressure and desorbing methane by pressure reduction to lower pressure, said process comprising:

- introducing said gas mixture to the inlet end of the first of a series of four beds containing activated carbon selective adsorbent material each bed having inlet and discharge ends, said mixture being introduced to said first bed inlet end at first highest suprathmospheric pressure for flow through said first bed with selective adsorption of ammonia and methane and also adsorption of nitrogen and argon and discharge of unadsorbed product effluent com-

prising hydrogen, nitrogen and argon from the discharge end, continuing such flow so that a methane adsorption front is established at said inlet end and moves progressively toward the discharge end, and terminating such flow when said methane adsorption front is entirely within said first bed so that the bed remains filled with void space gas at said first highest pressure;

- (b) first pressure equalizing said first bed with a second bed at higher intermediate pressure by releasing void space gas from the first bed discharge end and flowing same to the discharge end of the second bed having previously been partially repressurized to lower intermediate pressure;
- (c) concurrently depressurizing said first bed by releasing further void space gas from the discharge end and flowing same into the discharge end of a third bed partially loaded with said methane for countercurrent purging thereof at a lowest pressure;
- (d) second pressure equalizing said first bed with said third bed at lower intermediate pressure by releasing sufficient additional void space gas from the first bed discharge end for methane breakthrough and flowing same to the third bed immediately after purging the adsorbate therefrom at said lowest pressure for partial repressurization of the third bed to lower intermediate pressure;
- (e) reducing the inlet end pressure of said first bed thereby countercurrently desorbing part of the adsorbate and discharging same through said inlet end and continuing the discharge until said first bed is at said lowest pressure;
- (f) introducing cocurrent depressurization void space gas from a fourth adsorbent bed to the discharge end of said first bed for low there through countercurrent to the previously flowing gas mixture so as to urge at least part of the remaining adsorbate at said lowest pressure and remove same through the bed inlet end;
- (g) introducing additional void space gas from said fourth adsorbent bed to said first bed for partial repressurization thereof until said first and fourth beds are pressure equalized at lower intermediate pressure as the fourth bed second pressure equalizing;
- (h) introducing void space gas from second bed to the first bed discharge end for further repressurization thereof until said first and second beds are pressure equalized at higher intermediate pressure as the second bed first pressure equalizing;
- (i) introducing product effluent from said third bed the first bed discharge end for final countercurrent repressurization thereof to pressure above said higher intermediate pressure;
- (j) reintroducing said gas mixture to the inlet end of the repressurized first bed in a manner analogous of step (a) and thereafter consecutively repeating steps (b) through (i); and
- (k) consecutively following the sequence of steps (a) through (j) with the fourth, second and third beds in accordance with the flow cycle sequence of Figure 3.

(Complete specification 37 pages. Drawings 5 sheets).

CLASS : 7, 67A, 186A

153377.

Int. Class : H03h 7/18 & H02h 5/04.

"SECURITY SYSTEM FOR INDICATING AN INTRUSION INTO AN AREA BEING PROTECTED".

Applicants : METAFIX, a French Company having their Head Offices at Avenue Eugene Gazeau, Zace, 60300 Senlis, France, and TREFILUNION, a French Company having their Head Offices at B.P. 55, 52102 Saint-Dizier, France.

Inventors : JACQUES DRAY AND PAUL CANOBBIO.

Application for Patent No. 864/DEL/79 filed on 3rd December, 1979.

Appropriate Office for opposition proceedings (Rule 4, Patents Rule, 1972), Patent Office Branch, New Delhi-110005.

(7 Claims)

A security system for indicating an intrusion into an area being protected, comprising :

- (a) a bridge circuit including four arms and having pairs of input and output terminals, said bridge circuit being subject to drift due to a shift in phase of an output signal produced at said output terminals relative to an input signal at said input terminals,
- (b) an alternating current voltage source connected with said bridge circuit input terminals,
- (c) first and second conducting elements connected in two adjacent bridge arms, respectively,
- (d) a pair of reference elements connected in the remaining two bridge arms, respectively, at least one of said reference elements having a variable impedance,
- (e) intrusion indicating means including :
  - (1) means connected with said output terminal for monitoring the impedance of one of said conducting elements,
  - (2) means connected with said monitoring means to produce an alarm signal in response to a change in the impedance of said one conducting element resulting from an intrusion, and
  - (3) alarm circuit means connected with said alarm signal producing means for activating an alarm in response to said alarm signal, and
- (f) means for compensating for said bridge circuit drift comprising :
  - (1) phase shift detector means connected with said output terminals for producing a drift signal corresponding to the output signal phase shift with respect to the alternating current supply source, and
  - (2) means connected with said phase shift detector means for modifying the impedance of said one reference element in response to said drift signal.

(Complete specification 19 pages. Drawings 3 sheets).

CLASS : 65B<sub>1</sub>, 98G.

153378.

Int. Class : H01f 27/12.

"MULTIFLUTE RADIATORS FOR TRANSFORMER COOLING".

Applicant : BHARAT HEAVY ELECTRICALS LTD., 18-20, Kasturba Gandhi Marg, New Delhi-110 001, India, an Indian Company.

Inventors : KALE SIVASANKARA RAO, SURENDRA NARAIN AGARWAL, BISHAMBHAR SWAROOP, KRISHNAN NAMBOODRIPAD KRISHNAN ANCHA RAJENDRA PRASAD AND PARVATHA REDDY VENKATESWARLU.

Application for Patent No. 865/DEL/79 filed on 4th December, 1979.

Complete Specification left on 2nd March, 1981.

Appropriate Office for opposition proceedings (Rule 4, Patents Rule, 1972), Patent Office Branch, New Delhi-110005.

(11 Claims)

A multiflute radiator for cooling oil which is heated in transformers, comprising two fluted panels welded together to provide oil flow channels there between, each of the flutes in the panels being trapezoidal in horizontal cross section, the inclined faces of each flute making angles with the vertical planes of the panels and the flow channels being interconnected at intervals.

(Provisional Specification 6 pages. Drawing 1 Sheet).

(Complete Specification 9 pages).

CLASS : 184, 59B

153379.

Int. Class : B65d 87/18, E04d 13/04.

"FLOATING ROOF TANK".

Applicant : PITTSBURGH-DES MOINES STEEL COMPANY, a corporation incorporated under the laws of the State of Pennsylvania, United States of America, of Neville Island, Pittsburgh, Pennsylvania 15108, United States of America.

Inventors : DEAN KING MCKIBBIN, RICHARD ERVIN HILLS, JOEL BLACKMAN AND FRANKLIN ANDREW KUHS.

Application for Patent No. 868/DEL/79 filed on 4th December, 1979.

Appropriate Office for opposition proceedings (Rule 4, Patents Rule, 1972), Patent Office Branch, New Delhi-110005.

(21 Claims)

A floating roof tank wherein the drainage system, comprises a roof drain on the floating roof; a tank drain on the tank; a plurality of pipes forming a loop and including a first pipe connected to the roof drain and a second pipe connected to the tank drain; a plurality of rigid pipe connections connecting individual pipes of the plurality thereof to the next adjacent ones of the plurality and welded to the pipes so connected to rigidify the loop and render the same essentially continuous from the roof drain to the tank drain, and connectors connecting selected pipes of the plurality thereof to the floating roof.

(Complete Specification 35 pages. Drawing 8 Sheets).

CLASS : 151 F

153380.

Int. Class : B29c 17/00.

"A WROUGHT PRODUCT OF A BIAXIALLY ORIENTED SFMI-CRYSTALLINE THERMOPLASTIC POLYMER AND METHOD AND APPARATUS FOR MANUFACTURING THE SAME".

Applicant : BETHLEHEM STEEL CORPORATION, of Bethlehem, Pennsylvania 18016, United States of America, a U. S. Corporation.

Inventors : ALFRED ROBERTSON AUSTEN &amp; DARRAL VICTOR HUMPHRIES.

Application for Patent No. 662/DEL/1979 filed on 19th September, 1979.

Appropriate Office for opposition proceedings (Rule 4, Patents Rule, 1972), Patent Office Branch, New Delhi-110005.

(40 Claims)

A wrought product of a biaxially oriented semi-crystalline thermoplastic polymer such as a conduit, sheet or article of manufacture of the kind such as herein described which is comprised of at least one layer of a biaxially oriented semi-crystalline thermoplastic polymer and characterised by :

- (a) substantially uniform thickness of at least 0.079 centi-meter, which thickness does not vary by more than 10%.
- (b) a molecular structure of platelet-like spherulitic crystalline aggregates compressed in a plane transverse to the thickness of the layer and substantially devoid of process induced microvoids and microfibrils.
- (c) a tensile impact strength at -45°C which is at least 20% of its tensile impact strength at 24°C.
- (d) a tensile impact strength at 24°C which is at least 5 x the tensile impact strength of the same polymer in an unoriented state,
- (e) an ultimate tensile strength at 24°C which is at least 1.75 x the ultimate tensile strength of the same polymer in an unoriented state, and
- (f) a ratio of tensile impact strength over ultimate tensile strength which is at least 50% greater than such ratio determined for the same polymer which is biaxially oriented in a conventional stretch orienting process.

(Complete specification 87 pages. Drawing 4 sheets).

CLASS : 107K

153381.

Int. Class : F01p 11/00.

"IMPROVEMENT IN OR RELATING TO A MUSHROOM VALVE WITH FORCED FLUID COOLING, IN PARTICULAR FOR AN INTERNAL COMBUSTION ENGINE".

Applicant : SOCIETE D'ETUDES DE MACHINES THERMIQUES S.E.M.T., a French body corporate, of 2 Quai de Seine, 93202 Saint Denis, French.

Inventor : JEAN PAUL COULIN.

Application for Patent No. 686/DEL/79 filed on 25th September, 1979.

Appropriate Office for opposition proceedings (Rule 4, Patents Rule, 1972), Patent Office Branch, New Delhi-110005.

(15 Claims)

A valve, in particular for an internal combustion engine, of the mushroom type cooled by forced circulation of a cooling fluid, the valve stem comprising at least two longitudinal cooling passage-ways and the valve head being provided with a substantially peripheral cooling passage-way extending in a substantially parallel plane to the lower plane surface of the head and with at least two substantially radial passage-ways connecting the said longitudinal passage-ways to the said peripheral passage-way, characterized in that the passage-ways provided in the said valve head are constituted by rectilinear passage-way lengths extending from the periphery of the head and opening outwardly, the said peripheral passage-way being in the shape of a polygon, and in that the outwardly opening ends of said rectilinear passage-ways are obturated.

(Complete Specification 15 pages. Drawing 2 sheets).

CLASS : 63 B & 129 G

153382.

Int. Class : H02k 3/46.

**"APPARATUS FOR EXPANDING A CLOSED COIL TO AN EXPANDED COIL".**

Applicant : COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH, Rafi Marg, New Delhi-110 001, India, an Indian registered body incorporated under the Registration of Societies Act (Act XXI of 1860).

Inventors : SUSHIL KUMAR BASU, RAMESH CHANDRA BISHNU, MIHIR KUMAR BANERJEE, DILIP KUMAR PRAMANIK & BASUDEV SARKAR.

Application for Patent No. 7550/Del/79 filed on 27th October, 1979.

Appropriate Office for opposition proceedings (Rule 4, Patents Rule, 1972), Patent Office Branch, New Delhi-110005.

(14 Claims)

Apparatus for expanding a closed coil composed of a pair of elongate sides joined by rounded or curved ends, to an expanded coil intended essentially for the stator of an electrical machine, which comprises coil spreading means located on a support, said coil spreading means comprising a pair of arms pivotally connected at or near said support and adapted to move from a closed position substantially vertical to the surface of said support to an open or spread position in which said arms lie in a plane substantially parallel to said surface, the inner face of each arm being provided with axially slidably means adapted to slide up or down said inner arm face, first hydraulic drive means being provided for pivotally opening and closing said arms and second hydraulic drive means being provided for moving said axially slidably means up or down the inner face of each arm, a pair of spaced ram-supporting means located on said support on either side of said coil spreading means, the upper end of each said ram support means being adapted to support a ram transversely thereof, each ram being provided with hydraulic drive means for moving said ram in an axial direction, the end of each arm being provided with gripping means adapted to grip firmly a closed coil by its respective rounded ends, the construction being such that the coil when thus secured lies between the arms of said coil spreading means, each axially slidably means provided on the inner face of each arm being provided with means adapted to hold one elongate side of said closed coil, and means for shaping the elongate sides of the coil to provide overhang portions located on said support between said coil spreading means and said ram supporting means, said overhang shaping means being provided with a surface or contour into which the elongate sides of the coil

are pressed into contact by the action of the arms of the coil spreading means when said arms to which the elongate sides of the coil are secured move from their closed position to their open or spread position, the hydraulic drive means provided with each ram moving said ram axially inward towards said coil spreading means by a distance to compensate for the degree of outward spreading of the elongate sides of said coil.

(Complete Specification 18 pages. Drawing 2 sheets).

Class : 134 B.

153383

Int. Class : B 60k 17/00.

**"HYDROMECHANICAL TRANSMISSION FOR AN ENGINE DRIVEN VEHICLE".**

Applicant : S. R. M. Hydromekanik Aktiebolag, a Swedish Company, of Box 16, 162 11 Stockholm Vallby 1, Sweden.

Inventor : KARL GUSTAV AHLEN.

Application for Patent No. 765/Del/79 filed on 2nd November, 79.

Convention date 21st November, 1978/45431/78 (U.K.), 21st November, 1978/45432/78 (U.K.), 6th November, 1978/43313/78 (U.K.), & 6th November, 1978/43315/78 (U.K.).

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-110005.

9 Claims.

A hydromechanical transmission assembly for an engine driven vehicle, comprising a torque converter component, a complimentary mechanical gear component, a feeder fluid pump system component, a valve system component and an automatic and a manual control means component, characterised in that :

- (A) the torque converter component comprises at least one bladed pump member, at least one bladed guide member and at least one bladed turbine member with a ring of turbine blades following the pump member when considered in relation to the direction of fluid movement within the torque converter, a direct drive lock up clutch and a friction clutch operable to lock the guide member against rotation in at least one direction of rotation thereof;
- (B) the complimentary mechanical gear component is a multiple speed mechanical gear of the power shift type having one planet gear carrier and a plurality of planetary gears for producing a plurality of different gear ratios, a plurality of servo motors and associated clutches for controlling the operation of the complimentary gear;
- (C) the feeder fluid pump system component is servo-motor controlled and includes a low pressure pump arrangement of variable capacity, one high pressure pump and a heat exchanger;
- (D) the valve system component includes a first valve unit for controlling the flow of feeder fluid through the converter and a second valve unit for controlling the flow of the feeder fluid to the servo-motor which control operation of the complimentary gear, each of the first and second valve units including disc valves movable, to open and close relatively large valve port areas upon relatively short movements of the valves discs;
- (E) the automatic control means component includes a microprocessor for receiving first, second and third input signals of which :

- (a) the first input signal is related to the speed of vehicle engine (primary speed) and is derived from a primary speed sensor which is located on the output shaft of the vehicle engine and which electronically transmits to the microprocessor the first input signal which is related to the speed of the output shaft of the vehicle engine;
- (b) the second input signal is related to the speed of the output shaft of the transmission and is derived from a secondary speed sensor which is located on the output shaft of the transmission and which electronically transmits to the microprocessor the second input signal which is related to the speed of the output shaft of the transmission; and
- (c) the third input signal is related to the engine fuel injection settings derived from a measuring means which electronically transmit the third signal to the microprocessor, the microprocessor including preprogrammed memories whereby, dependent upon the input signals received, the microprocessor produces output signals to control the operation of the torque converter and the supply of fluid to the servo-motors of the complimentary mechanical gear, the feeder fluid pump system and the valve system so as to:
  - (1) obtain hydraulic drive at accelerations above a pre-determined value and below a predetermined speed of the output shaft;
  - (2) operate the feeder fluid pump system at a high capacity level below a certain speed ratio of the torque converter and during gear shifts and at hydraulic braking;
  - (3) operate the feeder fluid pump system component at a low capacity level under all direct drive condition;
  - (4) operate the feeder fluid pump system at a high capacity level below a certain speed ratio of the torque converter and during gear shifts at hydraulic braking and to operate the feeder fluid pump system at a low capacity level under all other driving condition, and
  - (5) operate the complimentary mechanical gear and the torque converter when the automatic control is set for braking according to braking demand and speed conditions.

(Complete specification 25 pages

Drawing 5 sheets).

CLASS : 39 3L.

Int. Class : C01g 31|00.

**A PROCESS FOR THE PREPARATION OF COMMERCIAL GRADE VANADIUM PENTOXIDE AND BY-PRODUCT SODIUM SULPHATE FROM VANADIUM SLUDGE OF ALUMINA INDUSTRY.**

Applicant : COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH, Rafi Marg, New Delhi-110001, India, an Indian registered body incorporated under the Registration of Societies Act (Act XXI of 1860).

Inventors : RAVINDRA SINGH THAKUR & BHARAT RAMKRISHNA SANT.

Application for patent no. 768|DEL|79 filed on 2nd November, 1979.

Complete Specification left on 2nd February, 1981.

Appropriate Office for opposition proceedings (Rule 4, Patents Rule, 1972). Patent Office Branch, New Delhi-110005.

(2 Claims)

A process for the preparation of commercial grade vanadium pentoxide and by-product sodium sulphate from vanadium sludge characterised in that the sludge is treated with an

2-147GI/84

aqueous solution of ammonium sulphate at an acidic pH followed by addition of sulphuric acid and precipitation of ammonium vanadate which on roasting yields commercial grade vanadium pentoxide and recovering sodium sulphate by-product from the filtrate by evaporation.

Provisional Specification 3 pages. Complete Specification 5 pages.

CLASS : 40F &amp; 85C

153385.

Int. Class : B01j 7|00 &amp; F23c 11|00.

**"METHOD FOR PREPARING A COMBUSTIBLE GASEOUS FUEL MIXTURE FOR A FURNACE AND APPARATUS THEREFOR".**

Applicant : SOUTHWIRE COMPANY, a corporation of the State of Georgia, United States of America, of 125 Fertilla Street, Carrollton, Georgia 30117, United States of America.

Inventors : MILTON EDWARD BERRY AND RONALD LEE PARAIANI.

Application for patent no. 786|DEL|79 filed on 6th November, 1979.

Appropriate Office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

(21 Claims)

A method for preparing a combustible gaseous fuel mixture for a furnace, particularly for a metallurgical melting furnace, comprising the steps of :

providing a first gaseous fuel component having a characteristic temperature and pressure, said first component being an oxygen-containing fluid;

providing a second gaseous fuel component having a characteristic temperature and pressure, said second component being a hydrocarbon-containing fluid;

mixing said first and second gaseous fuel components to a predetermined volume ratio and supplying the gaseous fuel mixture to a furnace for combustion therein;

Characterised in that in order to assure that the gaseous components of the fuel mixture supplied to the furnace will have a constant mass ratio regardless of fluctuations in the temperature and pressure of said first and second gaseous fuel components, the temperature and pressures of said first and second gaseous fuel components are equalized prior to mixing thereof.

(Complete specification 20 pages. Drawing 2 sheets).

CLASS : 84C

153386.

Int. Class : C08i 1|06 &amp; B01j 2|00.

**"COAL RECOVERY PROCESS".**

Applicant : OTISCA INDUSTRIES LIMITED, a corporation organised under the laws of the State of New York, United States of America, of P.O. Box, 127 Saline Station, Syracuse, New York, 13208, United States of America.

Inventor : DOUGLAS VERN KELLER.

Application for patent no. 788|DEL|79 filed on 6th November, 1979.

Appropriate Office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

## (7 Claims)

A process for recovering coal with a minimum pyrite content from an aqueous slurry containing raw coal, said process comprising the steps of : maintaining calcium oxide in the slurry in an amount which ranges from 0.13 to 0.53 weight percent based on the weight of the aqueous carrier in said slurry and which therefore exceeds that sufficient to form a saturated solution with the aqueous phase of the slurry; maintaining an agglomerant which is a fluorochloro derivative of methane or ethane, a petroleum distillate or solvent, a nitrobenzene, kerosene, a lubricating, fuel, or residual, oil or a chlorinated biphenyl in said slurry in an amount ranging from 2 to 10 weight percent based on the weight of the aqueous carrier-raw coal-agglomerant-calcium oxide system; concomitantly comminuting the raw coal in said slurry to effect a separation of the coal from pyritic sulfur and other mineral matter associated therewith and to expose fresh surfaces on the coal particles; coalescing the separated coal particles into agglomerates while effecting a dispersion of the pyritic sulfur and other mineral matter in the aqueous liquid carrier portion of the slurry; and recovering the agglomerates from the slurry.

(Complete specification 30 pages. Drawing one sheet).

CLASS : 108C<sub>3</sub>

153387.

Int. Class : C 21, 7/00.

**"A PROCESS FOR REFINING MOLTEN STEEL."**

Applicant : UNION CARBIDE CORPORATION, a corporation organised and existing under the laws of the State of New York, United States of America; and NATIONAL STEEL CORPORATION, a corporation organised and existing under the laws of the State of Delaware, United States of America, and having offices at: 270 Park Avenue, New York, State of New York 10017; 2800 Grant Building, Pittsburgh, State of Pennsylvania 15219, United States of America, respectively.

Inventor : Jennings Bryan Lewis III and Peter Patrick Kelly.

Application for patent no. 789/DEL/79 filed on 6th November, 1979.

Appropriate Office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

(7 Claims)

In a process for refining molten steel contained in a vessel by blowing oxygen into the melt from above the melt surface whereby an emulsion is formed above said surface, the improvement comprising:

Preventing slopping of said emulsion from said vessel by:

(a) blowing an inert gas such as herein defined into the vessel when slopping is imminent or has begun, at a flow rate sufficient to stop slopping, while continuing to blow with oxygen, and

(b) ceasing the blow of inert gas into the vessel when slopping has stopped or is no longer imminent.

(Complete specification 14 pages. Drawing sheet 1).

CLASS : 32A<sub>2</sub>

153388.

Int. Class : C09b 57/00.

**"PROCESS FOR THE PREPARATION OF BASIC DYESTUFFS"**

Applicant : BAYER AKTIENGESELLSCHAFT, a body corporate organised under the laws of the Federal Republic of Germany, of 5090 Leverkusen, Bayerwerk, West Germany.

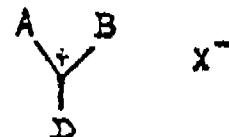
Inventor : KARL HEINZ HFRHANN.

Application for patent no. 792/DEL/79 filed on 7th November, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

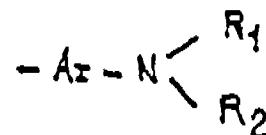
(4 Claims)

Process for the preparation of basic dyestuffs of the general formula I



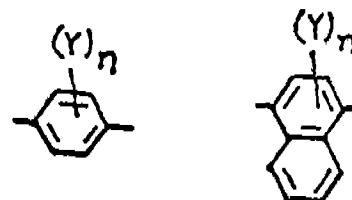
in which :

A and B independently of one another represent a heteroaromatic radical of the kind such as herein described or a radical of the general formula II



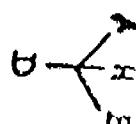
in which :

Ar denotes the grouping shown in Fig. 1 or Fig. 2



in which :

Y represents hydrogen or a non-ionic substituent such as herein described, and n represents a number between 1 and 4, and R<sub>1</sub> and R<sub>2</sub> represent hydrogen or alkyl, aryl or aralkyl which is optionally substituted by non-ionic or acid groups, or together, or with the opposition of Ar, from a heterocyclic ring. D denotes hydrogen, alkyl, aryl which is optionally substituted by neutral or acid groups, or a heteroaromatic radical and X-represents an anion such as herein described, characterised in that compounds of the general formula III



in which :

A, B and D have the abovementioned meaning, are oxidised with oxygen in the presence of catalytic amounts of benzoquinones which are substituted by halogen or cyano or of phenanthrenequinones which are substituted by nitro, and in

the presence of catalytic amounts of nitrogen oxides, with the exception of dinitrogen monoxide, or substances which produce such nitrogen oxides of the kind such as herein described under the reaction conditions.

(Complete Specification 14 pages. Drawing 7 sheets).

CLASS : 134 D

153389.

Int. Class : B62d 1/00.

**“DUAL STEERING SYSTEM FOR OFF HIGHWAY VEHICLES”.**

Applicant : UNIT RIG & EQUIPMENT COMPANY, a corporation incorporated under the laws of the State of Texas, United States of America, doing business at 5300 South 49th West Avenue, Tulsa, Country of Tulsa, State of Oklahoma, United States of America.

Inventor : EARL BECK.

Application for patent no. 795|Del|79 filed on 8th November, 1979.

Appropriate Office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

(6 Claims)

Dual vehicular steering apparatus with a primary steering system for normal operation and a secondary system for emergency operation triggered by pressure sensitive switching and valving means wherein both systems have in common a pair of single rod hydraulic steering cylinders, each being connected to a steerable wheel of the vehicle and being capable of steering the vehicle despite complete failure of the other steering cylinder; engine means to power said vehicle, hydraulic fluid stored in a tank, cylinder shuttle valve means for each steering cylinder to separate said primary system from said secondary system, and means for conducting said fluid from said cylinder shuttle valve means to said steering cylinders and wherein said primary system comprises main pump means driven by said vehicle engine to maintain an acceptable level of pressure in said primary system; a high pressure filter; means for conducting fluid from said pump to said filter where said fluid is filtered; a priority flow divider to divert said fluid in excess of an acceptable pressure level; means for conducting said fluid from said filter to said priority flow divider; a control valve to regulate the flow of said fluid; means to conduct fluid from said priority flow divider to said control valve; proportional valve means to proportionately regulate fluid flow between said cylinders; means for conducting said fluid from said control valve to said proportional valve means; and means to conduct said fluid from said proportional valve means to said cylinder shuttle valve means; and wherein said secondary system comprises secondary steering pump means; electric motor means driven by the vehicular battery to drive said secondary pump; an accumulator; pressure sensitive switching and valving means to conduct said fluid from said secondary pump to said accumulator; means to conduct said fluid from said accumulator to said cylinder shuttle valve means; means to apply equal pressure to both ends of each steering cylinder thereby locking said steering cylinders in a single operating mode; means to selectively drain fluid from selected ends of said steering cylinders to effect steering; and operator controlled secondary steering switch and valve means to operate said fluid drain means.

(Complete specification 13 pages. Drawing 2 sheets).

CLASS : BOK

153390.

Int. Class : B01d 13/04.

**“DRY, PARTICULATE, INORGANIC ULTRAFILTRATION MEMBRANES AND THE PRODUCTION THEREOF”.**

Applicant : UNION CARBIDE CORPORATION, Manufacturers, a corporation organised under the laws of State of New York, located at 270 Park Avenue, New York, State of New York 10017, United States of America.

Inventors : PAK SANG LEUNG AND ANTHONY CACCIOLA.

Application for patent no. 801|DEL|79 filed on 9th November, 1979.

Appropriate Office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

(63 Claims)

A process for the production of a dry, inorganic ultrafiltration membrane comprising :

(a) coating the surface of a microporous membrane support of the kind such as herein described with a membrane coating material of the kind such as herein described in the presence of a volatile liquid medium of the kind such as herein described non-solvating to said coating material and capable of drawing said coating material into said support and of desolvating said coating material; and

(b) exposing the thus-treated membrane to a temperature capable of volatilizing said liquid medium to remove said liquid medium from the microporous membrane support and said membrane coating material, whereby the desolvation of said coating material prior to completion of removal of said liquid medium results in a shrinking of said coating material and the consequent filling of voids.

(Complete Specification 27 pages).

CLASS : 179F & 163B<sub>3</sub>

153391

Int. Class : B65b 37/08.

**“APPARATUS FOR PROCESSING MATERIALS”.**

Applicant : USM CORPORATION, a corporation duly organised and existing under the laws of the State of New Jersey, United States of America, and having a principal place of business at 426 Highway, Farmington, 06032, Connecticut, United States of America.

Inventor : LEFTERIS NICKOLAS VALSAMIS.

Application for patent No. 802|Del|79 filed on 9th November, 1979.

Appropriate office for opposition proceedings, (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-110005.

8 Claims

Apparatus for processing materials of the kind such as herein described which are, or in the course of processing become, liquid and which comprise a rotatable element carrying at least one primary processing channel and at least one further processing channel and a stationary element providing a coaxial surface cooperative with the processing channels to provide an enclosed primary processing passage and an enclosed further processing passage; stationary solid members extending into each channel and providing a material collecting and well for each channel, an inlet means through the stationary element for introducing the material into at least primary processing channel.

means to transfer said material processed in the primary processing channel to the further processing channel and an outlet for discharge of said material from the further processing passage; the rotatable element being rotatable in a direction from the inlet toward the outlet to provide a connection between the rotating side walls of the channels and the material collecting end wall of the channels so that said material in contact with the side walls is dragged forward to the material collecting end wall so that material collected at the end wall of the primary processing passage is transferred to the further processing passage and material collected at the end wall surface of the further processing passage is discharged from the apparatus characterized in that the said inlet means introduces the material to the primary processing channel at a volume rate at least equal to the rate needed to fill the uptake capacity of the primary processing channel through the medium of an intake chamber or chambers located adjacent the said inlet means for providing the primary processing channel with an intake capacity which exceeds the through-put capacity of the primary processing channels the geometry of the primary channel providing a processing capacity relative to the geometry of the further channel sufficient to transfer said material from the primary channel to the further channel at a volume rate at least equal to the rate at which the further channel processes and discharges said material.

(Complete specification 25 pages. Drawings. 2 sheets).

CLASS : 32 F, 153392

Int. Class : C07, 9/00.

"PROCESS FOR THE PREPARATION OF PHOSPHONIC ACID ESTERS".

Applicants : BAYER AKTIENGESELLSCHAFT, A BODY CORPORATE ORGANISED UNDER THE LAWS OF THE FEDERAL REPUBLIC OF GERMANY, OF 5090 LEVERKUSEN, BAYERWARK, WEST GERMANY.

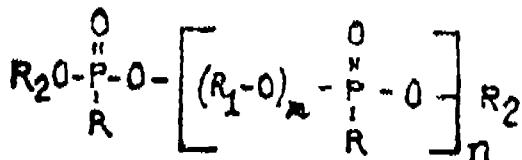
Inventors : KONRAD NONN, KLAUS WALZ, KARL HEINZ WOLF AND GUNTHER BOEHMKE.

Application for patent No. 805/Del/79 filed on 12th November, 1979.

Appropriate office for opposition proceedings, (Rule 4, patents rules 1972) Patent Office Branch, New Delhi-110005.

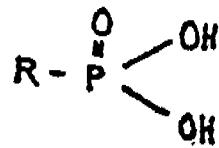
4 Claims

A process for the preparation of phosphonic acid esters of the general formula I

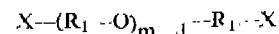


in which R represents a C<sub>12</sub>-C<sub>22</sub>-alkyl or-alkenyl radical, a C<sub>7</sub>-C<sub>10</sub>-aralkyl radical or a radical of the formula -R<sub>4</sub>-O-CO-R<sub>5</sub> or -R<sub>4</sub>-COO-R<sub>5</sub>, wherein R<sub>4</sub> denotes an optionally substituted C<sub>2</sub>-C<sub>4</sub>-alkylene radical and R<sub>5</sub> denotes a C<sub>6</sub>-C<sub>22</sub>-alkyl or -alkenyl radical or a cycloalkyl radical, R<sub>1</sub> represents the ethylene and/or 1, 2-propylene radical, R<sub>2</sub> represents hydrogen C<sub>1</sub>-C<sub>4</sub>-alkyl or -(R<sub>1</sub>-O)<sub>1</sub>-R<sub>1</sub>-R<sub>3</sub>, R<sub>3</sub> represents OH, Cl or Br, m represents an integer from 2 to 100 and n represents a number from 1 to 10, characterised

in that C<sub>1</sub>-C<sub>2</sub>-alkyl esters aryl esters or halides of phosphonic acids of the general formula II



wherein R has the meaning indicated above, are reacted with polyglycol ethers of the general formula IIa wherein X is Hal or CH and R<sub>1</sub> and m have the meaning given above.



(Complete specification 12 pages.

Drawing 1 sheet)

CLASS : 32 F(1)

153393

Int. Class : C07, 121/32.

"A PROCESS FOR THE RECOVERY AND PURIFICATION OF A-CRYLONITRILE".

Applicant : THE STANDARD OIL COMPANY, AN OHIO CORPORATION, HAVING A PLACE OF BUSINESS AT MIDLAND BUILDING, CLEVELAND, OHIO 44115, UNITED STATES OF AMERICA.

Inventor : PAUL SCOTT ODOM.

Application for Patent No. 806/Del/79 filed on 12th November, 1979.

Appropriate office for opposition proceedings, (Rule 4, patents rules 1972) Patent Office Branch, New Delhi-110005.

7 Claims

A process for the recovery and purification of acrylonitrile from an aqueous solution of acrylonitrile, acetonitrile, HCN and impurities comprising the steps of

- (a) distilling the aqueous solution in an extractive distillation column with solvent water to produce an overhead stream of acrylonitrile, HCN and water, a bottom stream of water and impurities and a side stream of acetonitrile, which is passed to a stripping column for its removal.
- (b) distilling the overhead stream of (a) in one or more additional distillation columns to recover acrylonitrile, characterised in that the bottom stream of (a) is passed in indirect heat exchange relationship with one or more additional distillation columns to provide heat for distillation.

(Complete specification 10 pages.

Drawing sheet 1)

CLASS : 189

153394

Int. Class : A61k 5/00.

"PROCESS FOR PREPARATION OF RADIO-OPAQUE DENTAL COMPOSITIONS".

Applicant : COLGATE-PALMOTIVE COMPANY OF 300 PARK AVENUE, NEW YORK, NEW YORK 10022, UNITED STATES OF AMERICA, A CORPORATION ORGANISED UNDER THE LAWS OF THE STATE OF DELAWARE, U.S.A.

Inventor : SAMUEL CANTOR TEMIN.

Application for patent No. 807|Del|79 filed on 13th November, 1979.

Appropriate office for opposition proceedings, (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005

18 Claims

Process for the preparation of a radio-opaque dental restorative composite composition which comprises blending a mixture of from 20 to 80 parts by weight of a conventional liquid polymerizable resin binder and from 20 to 80 parts by weight of finely divided filler composition, said filler composition including as substantially only  $\gamma$ -ray absorbing constituent, from 3 to 10% by weight of thorium oxide or tantalum oxide or a blend of thorium oxide and tantalum oxide, and curing the mixture under polymerization conditions in the presence a conventional polymerization catalyst.

(Complete specification 18 pages).

CLASS : 116 C.

153395.

Int. Class : B29h 3|00.

"A PROCESS FOR THE PRODUCTION OF SOLID WOVEN CONVEYOR BELTING AND SOLID WOVEN CONVEYOR BELTING SO PRODUCED".

Applicant : TBA Industrial Products Limited, a company organised under the laws of Great Britain, of 20 St. Mary's Parsonage, Manchester M3 2NL, England.

Inventors : PETER JOHN LITCHFIELD &amp; JOHN KEITH TAYLOR.

Application for patent No. 808|Del|79 filed on 13th Nov., 1979.

Convention date 22nd November, 1978; 45621|78 (U.K.).

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-110005.

(13 Claims)

A process for the production of solid woven conveyor belting, said process including the step of treating a solid woven belting fabric carcass with an impregnant material of the kind such as herein described by subjecting said carcass to a plurality of alternating changes of direction whilst immersed in said material, each change in direction being brought about by causing the carcass to follow a generally curved path having a radius of curvature less than 75 mm.

(Complete specification 13 pages. Drawing 1 sheet).

CLASS : 80 I.

153396.

Int. Class : B01d 43|00.

"FLOW DISTRIBUTION MEANS FOR SCREENING APPARATUS".

Applicant : DORR OLIVER INCORPORATED, of 77 Havemeyer Lane, Stamford, Connecticut, United States of America, a corporation organised under the laws of the State of Delaware, United States of America Engineers.

Inventor : ROFERT ARTHUR SCHALL.

Application for patent No. 810|Del|79 filed on 13th November, 79.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-5.

(10 Claims)

A Screen unit for separating solids from a liquid solids slurry, comprising :

- (a) a screen having a plurality of discharge openings,
- (b) spaced outlets for respectively receiving solids overflow from said screen and liquid underflow from said discharge openings,
- (c) feed input means for receiving a liquid-solids slurry for discharge to said screen,
- (d) nozzle means interposed between said feed input means and said screen surface for distributing and controlling the flow of said slurry to the surface of said screen
- (e) said nozzle means including a cylindrical housing mounted on said screen unit and extending transversely of said screen surface adjacent one end thereof and having a longitudinally extending discharge opening,
- (f) Valve means contained within said nozzle housing and including a tubular rotatable member having spaced inlet and outlet longitudinal slot openings aligned respectively with the discharge of said feed input means and with said discharge opening in said nozzle housing and
- (g) control means connected to said rotatable valve member for rotating said member to selectively vary the net size of said pair of aligned openings and the velocity of flow of said liquid-solids slurry through said nozzle means to said screen.

(Complete specification 16 pages. Drawing 3 sheets).

CLASS : 63D &amp; 36A1.

153397.

Int. Class : H01g 1|02 &amp; H03k 5|22.

"A TERMINAL BOX UNIT FOR AN A.C. CEILING FAN".

Applicant : The Jay Engineering Works Ltd., an Indian Company having its Registered Office at 23, Kasturba Gandhi Marg, New Delhi-110001, India.

Inventor : VIRENDRA NATH KHURANA.

Application for patent No. 811|DEL|79 filed on 13th November, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-110005.

(8 Claims)

A terminal box unit for an A.C. ceiling fan comprising a terminal box and a clamp integral with the terminal box for supporting a condenser, the said unit being provided with a central hole adapted to fit around the rod or shaft of the stator of the motor, means for securing the said unit to the said rod or shaft; means provided on the said unit for supporting the condenser on the clamp and means provided on the terminal box for connecting the mains supply to the motor of the fan.

(Complete Specification 8 pages. (Drawing 2 sheets).

CLASS : 199.

153398.

Int. Class : G01f 23|14 &amp; GO 5d 9|12.

"MEANS FOR DETECTING LIQUID LEVELS IN A CONTAINER".

Applicant : SCHLOEMANN SIEMAG AKTIENGESELLSCHAFT, a German Company, of 4000 Dusseldorf 1, Germany.

Inventor : HANS WERNER MESECK.

Application for patent No. 813|Del|79 filed on 14th November, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-110005.

(3 Claims)

Means for detecting liquid levels in a container, using ultrasonic sound, said means comprising a plurality of detection units mounted on the outside of the container and spaced over its height, each unit being able to detect the presence or absence of liquid in the container at its own level, each unit comprising a transmitter and a receiver for receiving ultrasonic sound pulses transmitted by the transmitter and a device for producing sound pulses, which device is connected to the transmitter to pass the pulses thereto, and is connected to the receiver to receive and evaluate pulses therefrom, and is arranged to emit a signal indicating the presence or absence of liquid at the level of the unit and to emit signals to switch on or off pumps, safety devices or valves.

(Complete specification 11 pages. Drawing 2 sheets).

CLASS : 8 & 67A.

153399.

Int. Class : G08b 17|12.

"A DETECTOR FOR DETECTING FIRES"

Applicant : CRUCIBLE SOCIETE ANONYME, of 14 Rue Aldringen, Luxembourg, a company registered according to the laws of the Duchy of Luxembourg.

Inventors : Nicolaas Tjaart Van Der Walt, Bernardus Johannes Bout, Timothy John Newington.

Application for Patent No. 815|Del|79 filed on 14th November 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-110005.

(7 Claims)

A detector for detecting fires which includes a housing, a single measuring chamber being formed within the housing, one or more apertures being formed in the wall of the chamber, to permit the circulation of air through the chamber, an electrode mounted on an insulating support inside the chamber, means to apply a potential difference between the electrode and housing, an ionising source inside the chamber which produces an ionisation current which is collected by the electrode, an amplifier to amplify the ionisation current, characterised by means connected to the means to apply a potential difference between the chamber and the housing to maintain the potential difference constant and means connected to the amplifier to provide an indication with variation of time of the ionisation current.

(Complete specification 10 pages. Drawing 1 sheet).

CLASS : 32E

153400.

Int. Class : C07, 47|08.

"PROCESS AND APPARATUS FOR CONTINUOUS PRODUCTION OF POLYURETHANE FOAM".

Applicant : REEVES BROTHERS, INC., a corporation organised under the laws of the State of New York, United States of America, of 1271 Avenue of the Americas, New York, New York-10020, United States of America.

Inventor : DERK JAN BOON.

Application for patent No. 816|Del|79 filed on 14th November, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-110005.

(20 Claims)

In a process for continuously molding free-rising polyurethane foam in a continuous, laterally translating open top mold at a given bottom conveyor velocity by depositing a polyurethane foam forming mixture of reactants at a given feed rate on a pouring board the improvement comprising increasing the height of the molded flexible polyurethane foam product obtained by (i) depositing said polyurethane foam forming mixture of reactants near the apex of a first mold portion of the laterally translating mold, which first portion of said laterally translating mold has divergent first side walls which form an angle there between of more than 10° and less than 120° and which join, at their extremities, the parallel second side walls of a second portion of said translating mold, and (ii) allowing said polyurethane foam forming mixture of reactants to substantially complete its rise after traversing past said first portion of the translating mold.

(Complete Specification 28 pages. Drawings 3 sheets)

CLASS : 27B, 1

153401.

Int. Class : F04h 1|12

"PREFABRICATED BUILDING".

Applicant : JACQUES WYBAUW, of 41 Avenue Brunard, 1180—Bruxelles, Belgium, a citizen of Belgium.

Inventor : JACQUES WYBAUW.

Application for patent No. 818|DEL|79 filed on 15th November, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

(23 Claims)

A prefabricated building formed by joining together superposed and/or juxtaposed building units of metallic structure and wherein each building unit has the shape of a right prism and comprises :

a lower frame formed of wide flat metal bars disposed along the side faces of the prism in such a manner that the bottom edges of such frame forms the side edges of the bottom face of the prism;

an upper frame formed of wide flat metal bars disposed along the side faces of the prism in such a manner that the top edge of such upper frame forms the side edges of the top face of the prism;

metal uprights having a V-shaped cross section joining together said frames, each upright being disposed in such a manner that its vertex forms a vertical edge of the said prism and that its flanges, formed of wide flat bars, are disposed along the side faces of the prism, and

a metal sheet attached to each of said frames and forming, respectively, a self-supporting lower horizontal wall at a predetermined level across said lower frame and a self-supporting upper horizontal wall at a predetermined level across said upper frame, whereby said frames and respective walls together form enclosing structures open at the bottom.

(Complete specification 54 pages. Drawings 15 sheets).

CLASS : 131A<sub>2</sub>

153402.

Int. Cl. E 21 b 47|00.

AN APPARATUS WHICH RECEIVES A PHASE SHIFT KEYING SIGNAL MODULATED WITH DIGITAL INFORMATION FROM A BOREHOLE WHILE DRILLING AND RECOVERS THE DIGITAL INFORMATION THEREFROM.

Applicants : SCHLUMBERGER TECHNOLOGY CORPORATION, 5000 GULF FREEWAY, P.O. BOX 1472, HOUSTON, TEXAS 77001, UNITED STATES OF AMERICA.

Inventors : 1. WILLIAM N. WAGGENER, 2. GENE F. SCHROEDER.

Application No. 179|Cal|79 filed February 27, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

(5 Claims)

An apparatus which receives a phase shift keying signal modulated with digital information from a borehole while drilling and is operative to recover the digital information therefrom said PSK modulated signal having been modulated with the digital information by momentarily unidirectionally either decreasing or increasing the nominal frequency of a carrier signal as a function of the digital information to effect a phase change; said apparatus including a filter for use in selectively filtering the modulated carrier signal, said filter having a bandpass center frequency which is offset from the nominal carrier frequency in the direction of said unidirectional decrease or increase of frequency and means for recovering the digital information from the filtered signal.

Compl. specn. 38 pages. Drgs. 8 sheets.

CLASS : 77B.

153403.

Int. Cl. B 01 d 11|02.

A METHOD FOR EXTRACTING ONE OR MORE EXTRACTABLE SUBSTANCE FROM A SOLID MATERIAL

Applicants : SNAMPROGETTI S.p.A. OF CORSO VENEZIA 16, MILAN, ITALY.

Inventors : 1. EGIDIO EMMI, 2. GIANCARLO SODINI.

Application No. 537|Cal|79 filed May 24, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

(8 Claims)

A method for extracting one or more extractable substance from a solid material using one or more solvent, which method comprises supplying fresh solvent or solvent mixture to one of a plurality of extraction vessels arranged in series, each of which vessels contains the solid material and is provided with a solvent inlet, a solvent outlet, an operating stirring means and a filtering element for preventing the escape of solid material of more than a predetermined size through the solvent outlet, the filtering element extending into the vessel in the proximity of the stirring means so that the agitation of the solvent or solvent mixture by the stirring means reduces the tendency of the solid material to clog the filtering element, the solvent or solvent mixture being fed to said one extraction vessel and forwarded therefrom at a specific rate of flow in the range from 2 to 15 cubic metres per hour per square metre of the cross-sectional area of said one extraction vessel; passing solvent with entrained extracted substance (s) from the said one extraction vessel through the other extraction vessels in series; and then, after extraction of extractable substance (s) from the solid material in said one extraction vessel, switching the supply of fresh solvent or solvent mixture to the next downstream extraction vessel, removing solid material from said one extraction vessel, and recharging the said one extraction vessel with fresh solid material with the said one extraction vessel connected in series downstream of the previously most downstream extraction vessel.

Compl. specn. 28 pages. Drgs. 1 sheet.

CLASS : 32F.

153404.

Int. Cl. C 08 c 9|04.

PROCESS FOR THE PRODUCTION OF HIGHLY ABSORPTIVE MACROPOROUS POLYMERS.

Applicants : DIAMOND SHAMROCK CORPORATION AT 1800 SUPERIOR AVENUE, CLEVELAND, OHIO, U.S.A.

Inventors : 1. RICHARD WON, 2. ROBERT P. ZAJAC.

Application No. 906|Cal|79 filed August 30, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

(14 Claims)

A process for the production of highly absorbent macroporous resins, which comprises reacting a polyaminotriazine and formaldehyde in a molar ratio of 1 : 2 to 1 : 7 in the presence of an acid catalyst and at least one miscible organic porogen heating until gelation occurs, then curing the resulting resin.

Compl. specn. 11 pages. Drgs. Nil.

CLASS : 127I; 133A.

153405.

Int. Cl. B 23 q 21|00.

A DEVICE FOR MONITORING ANGULAR POSITION.

Applicants : SIEMENS AKTIENGESELLSCHAFT, OF BERLING AND MUNICH, WEST GERMANY.

Inventor : 1. JOSEF ROHRLE.

Application No. 1028|Cal|79 filed October 4, 1979.

Addition to No. 131|Cal|1979 dated 13th February, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

(4 Claims)

A device for monitoring angular position which device includes :

(a) a rotor winding;

(b) at least two stator windings;

(c) a voltage generator comprising digital dividing stages for generating alternating voltages which are out of phase with respect to each other from a clock signal and for applying these alternating voltages each to a respective one of the stator windings, thereby inducing an alternating voltage in the rotor winding whose phase is indicative of the angular position of the rotor;

(d) means for storing a digital value dependent on the instantaneous voltages applied to the stator windings at each zero-axis crossing of the voltage induced in the rotor winding, said digital value thus also being indicative of the angular position of the rotor;

(e) filter means and comparator means connected thereto, for detecting the zero-axis crossings of the voltage induced in the rotor winding; and

(f) means whereby the filter means can be switched at predetermined intervals to receive a voltage dependent on the voltages applied to the stator windings by the voltage generator and a change in the output from the comparator means at successive switchings is used to correct the said digital value.

Compl. specn. 8 pages. Drgs. 1 sheet.

CLASS : 126C.

153406

Int. Cl. G 01 n 27/00.

## GRAIN MOISTURE TESTING APPARATUS.

Applicants & Inventor : DEREK ERNEST STEELE, OF 61A BADEN TERRACE O'SULLIVAN BEACH, STATE OF SOUTH AUSTRALIA COMMONWEALTH OF AUSTRALIA.

Application No. 411/Cal/80 filed April 9, 1980.

Conventional date 10th April, 1979 (PD 836779) Australia.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

7 Claims.

A grain moisture testing apparatus of a type including means to hold grain under crushing compression within a cell including two electrodes each with a contact face to be in contact within one cell with crushed grain and conductance testing means connected to the electrodes, the apparatus being characterised according to this convention in that the conductance testing means include a source of substantially constant voltage, a plurality of separately selectable voltage dividers including as one of each of the elements of any of a selected voltage divider the resistance between the said two electrodes within the cell, a predetermined voltage level detection means, an output of the selected voltage divider being connected to the voltage level detection means, and indicator means connected to the said voltage level detection means, and indicator means and arranged whereby to indicate upon a voltage input into the voltage level detection means whether such voltage is above or below the said predetermined voltage level.

Compl. specn. 20 pages. Drgs. 3 sheets.

CLASS : 170B.

153407.

Int. Cl. C 11 d 3/00.

## A SOAKING, DETERGENT OR RINSING COMPOSITION FOR IMPROVING THE APPEARANCE OF USED, IN PARTICULAR SOILED, TEXTILES.

Applicants : CIBA-GEIGY AG, OF KLYBECKSTRASSE 141, 4002 BASLE, SWITZERLAND.

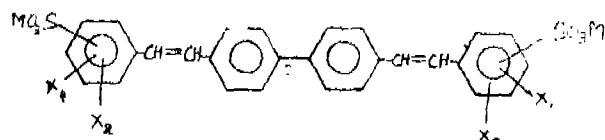
Inventors : 1. CLAUDE ECKHARDT, 2. RICHARD VON RUTE.

Application No. 1059/Cal/80 filed September 17, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

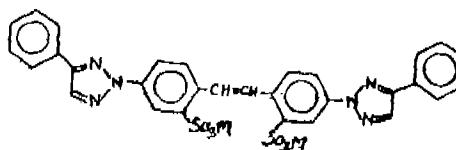
(18 Claims)

A soaking, detergent or rinsing composition for improving the appearance of used, in particular soiled, textiles, said composition containing, along with other customary ingredients, 0.0001 to 1%, preferably 0.001 to 0.1%, of a photoinitiator, and 0.005 to 1.5%, preferably 0.01 to 0.05%, in each case based on the total weight of the composition of a luphenyl-fluorescent whitening agent selected from the class of distyryl-sulfonic acids of the formula (20) shown in the accompanying drawings.



Formula 20

or their salts and/or of 4,4'-bis-(1,2,3-iazol-2-yl)-2,2'-stilbenesulfonic acids of the formula (24) shown in the drawings



Formula 24

or their salts, which composition may also contain a mixture of said fluorescent whitening agents.

Compl. specn. 33 pages. Drgs. 3 sheets.

CLASS : 32A.

153408.

Int. Cl. C 09 b 62/00.

## PROCESS FOR THE PREPARATION OF COPPER FOR-MAZAN COMPOUNDS.

Applicants : HOECHS AKTIENGESELLSCHAFT OF D-6230 FRANKFURT AM MAIN 80, FEDERAL REPUBLIC OF GERMANY.

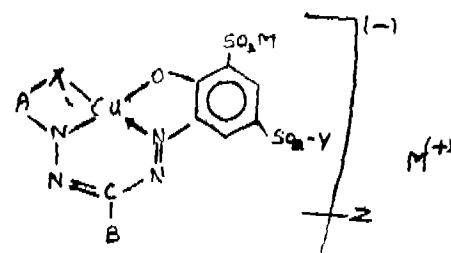
Inventors : 1. GUNTHER SCHWAIGER, 2. ERNST HOYER.

Application No. 1245/Cal/80 filed November 3, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

6 Claims.

A process for the preparation of a compound of the general formula (1) of the accompanying drawings



in which the radicals have the following meanings :

A can be substituted by Z, as defined below, and is a phenylene or naphthylene unsubstituted or substituted by substituents from the group comprising halogen, nitro, alkyl with 1 to 5 C-atoms, alkoxy with 1 to 4 C-atoms, alkylsulfonyl with 1 to 4 C-atoms, phenylsulfonyl, sulfamoyl and N-mono- and N, N-dialkyl-sulfamoyl with in each case 1 to 4 C-atoms in the alkyl;

B can be substituted by Z and is a straight-chain or branch-chain alkyl group with 1 to 8 C-atoms or a straight-chain or branched-chain alkenyl group with 2 to 8 C-atoms, these alkyl and alkenyl groups are unsubstituted or substituted by phenyl or by phenyl substituted by substituent from the group comprising methyl, ethyl, methoxy, ethoxy, fluorine, chlorine, bromine and sulfamoyl, or B is phenyl or naphthyl each unsubstituted or substituted by substituents from the group comprising hydroxy, nitro, halogen, alkyl with 1 to 5 C-atoms, alkoxy with 1 to 4 C-atoms and carboxy with 1 to 4 C-atoms in the alkyl moiety, or B is the monovalent radical of furan, thiophene, pyrrole, imidazole, indole, pyrazole, pyridine, pyrimidine, quinoline or benzimidazole, these hetero-

cyclic radicals are unsubstituted or substituted on an aromatic carbon atom, by chlorine, phenyl, methoxy, ethoxy, methyl or ethyl, and the hydrogen atoms in the NH groups of these heterocyclic rings may be replaced by methyl, ethyl or benzyl, or

B is a hydrogen atom;

Z is a water-solubilizing group and a substituent on A and B or both, being imperatively present in the formazan molecule once, twice or three-times and being bonded to an aromatic carbon atom or an aliphatic carbon atom of A or B;

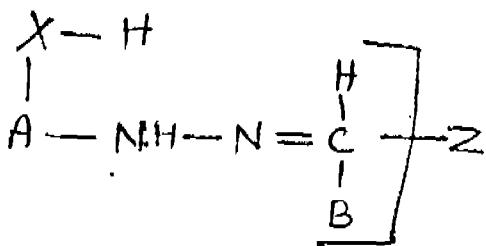
Cu is copper;

X is an oxygen atom or a carbonyloxy group of the formula -CO-O, which is bonded to A in the ortho-position relative to the nitrogen atom on A;

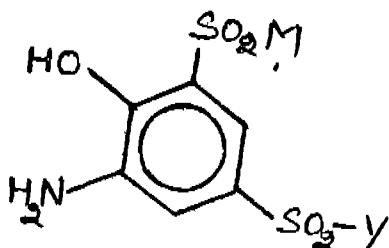
Y is vinyl or  $\beta$ -thiosulfatoethyl; and

M is hydrogen or an equivalent of a metal,

Which comprises reacting an aromatic hydrozone compound of the general formula (2)



In which A, B, X and Z have the meanings given above with the diazonium compound of an aromatic amine of the formula (3)



(in which M and Y have the meanings given above) and with an agent which donates copper.

Compl. specn. 45 pages. Drgs. 2 sheets.

CLASS : 32B.

153409.

Int. Cl. C 07 c 7/08.

METHOD FOR INHIBITING POLYMERIZATION OF CONJUGATED DIENES IN A PROCESS FOR SEPARATING CONJUGATED DIENES FROM A HYDROCARBON MIXTURE.

Applicants : NIPPON ZEON CO., LTD., OF 6-1, 2-CHOME, MARUNOUCHI, CHIYODA-KU, TOKYO, JAPAN.

Inventors : 1. HIROSHI HOKARI, 2. IWAKI NIXHITAL.

Application No. 1345/Cal/80 filed December 5, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

3—147GJ/84

2 Claims.

In a process for separating a conjugated diene from a hydrocarbon mixture containing the conjugated diene by extractive distillation using dimethyl formamide as an extractive solvent, a method for inhibiting polymerization of the conjugated diene in the dimethyl formamide at a high temperature which comprises using furfural and furfural polycondensates composed of a polycondensate of furfural, a polycondensate of furfural and the conjugated diene, and a polycondensate composed of a polycondensate of furfural a polycondensate of furfural and the conjugated diene, and a polycondensate of furfural and dimethyl amine generated by the decomposition of dimethyl formide as polymerization inhibitors, and controlling the amounts of the polymerization inhibitors, and controlling the amounts of the polymerization inhibitors such that 0.01 to 2% by weight, based on the solvent of furfural and 0.5 to 10% by weight, based on the solvent, of furfural polycondensates are present in a total amount of 1 to 12% by weight based on the solvent, throughout the entire separating process.

Compl. specn. 8 pages. Drgs. Nil.

CLASS : 139A.

153410.

Int. Cl. C 09c 1/50.

PROCESS AND APPARATUS FOR PRODUCING CARBON BLACK.

Applicants : PHILLIPS PETROLEUM COMPANY, OF BARTLESVILLE, STATE OF OKLAHOMA, UNITED STATES OF AMERICA.

Inventor : 1. MEREDITH NATHANIEL DILBERT.

Application No. 120/Cal/81 filed February 2, 1981.

(19 claims)

A method for making high tint residual carbon black comprising :

introducing hot combustion gases into a pre-combustion zone; introducing a feed hydrocarbon into the hot combustion gases to form a reacting mixture; flowing the reacting mixture along a flow axis; and

quenching the thus flowed reaction mixture with a diverging hollow cone spray directed in a direction generally coaxial with the flow axis, said cone spray having an included angle in the range of 120 to 170 degrees.

(Complete specification 21 pages. Drawings 2 sheets).

CLASS : 5D.

153411.

Int. Cl. A 01 h 3/00.

COVERING MATERIAL FOR USE IN THE CULTIVATION OF ALGAE.

Applicants : NIPPON CARBIDE KOGYO KABUSHIKI KAISHA, OF 3-1, 2- CHOME, MARUNOUCHI, CHIYODA-KU, TOKYO, JAPAN.

Inventors : 1. ISAMU HARASAWA, 2. YUKIO HARIKI, 3. KATSUHIKO MAFDA.

Application No. 369/Cal/82 filed April 1, 1982.

Division of Application No. 264/Cal/79 dated 17th March, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

(17 claims)

A covering material for use in the cultivation of algae, which substantially inhibits the transmission of light having a wavelength of not more than 340 nm and which is in the form of a film or plate composed of an organic film-forming resin and having an ultraviolet absorbers, as described, coated or incorporated in the film or plate, said film or plate further being optionally laminated to another plastic film or sheet.

Compl. specn. 17 pages. Drgs. 2 sheets.

CLASS : 127F, G &amp; I

153412.

Int. Cl. F 16 h 37/00.

**VARIABLE SPEED DRIVE WITH CLUTCHING AND BRAKING ACTION THROUGH A COMBINED PINIONING SYSTEM.**

Applicants & Inventor : RANENDRA NATH DAS, OF 28/D, RAKHAL GHOSH TANE CALCUTTA-700 085, WEST BENGAL, INDIA.

Application No. 1163/Cal/81 filed October 20, 1981.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, Calcutta.

8 Claims.

An n-stage variable speed drive with clutching and braking action through a combined pinioning system providing both direct and reversible cyclic speed reduction which comprises in each stage a first motion input shaft, a second motion shaft, an output shaft, the first motion input shaft having an input pinion, the second motion shaft having on one of its sides a driven pinion and a rotary follower pinion and on the other side a driving pinion, the output shaft having an output pinion and a driving block which carries the second motion shaft unit and a fixed follower pinion which is fixed on the central axis of the input shaft which functions both as a fixed follower pinion or a neutral pinion as the situation requires and the number of speeds obtained being given by the formula  $2^n$  where n is the number of stages employed.

Compl. specn. 23 pages. Drgs. 2 sheets.

CLASS : 39 J

Int. Class : C01, 45/00.

**"A PROCESS FOR THE MANUFACTURE OF GAMMA TYPE ACTIVATED MANGANESE DIOXIDE".**

Applicant : DR. SIDDHARTH GHOSH of 26/26, East Patel Nagar, New Delhi-110008, India, an Indian national.

Invention : DR. SIDDHARTH GHOSH.

Application for patent no. 836/DEL/79 filed on 21st November, 1979.

Complete specification left on 17th November, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

(7 Claims.)

A process for the production of gamma type activated manganese dioxide from divalent salt of manganese such as manganese sulphate which comprises in heating said divalent salt of manganese with an oxidizing agent comprising oxidizing acid or its salts or a mixture thereof and then heating the same in a current of air and/or oxygen at a temperature upto 200°C to obtain activated manganese dioxide.

(Provisional specification 5 pages)

(Complete specification 9 pages).

CLASS : 200D &amp; 145D

153414.

Int. Class : D21d 5/26.

**"METHOD AND APPARATUS FOR COLLECTING AND CONVEYING LIQUIDS".**

Applicant : CLARK & CORPORATION, a corporation of the State of New York, United States of America, of P. O. Box 10600, Pinellas Park, Florida 33565, United States of America.

Inventor : ROBERT GEORGE KAISER.

Application for patent no. 856/DEI/79 filed on 28th November, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

(27 Claims)

Apparatus for collecting a liquid at one location and conveying said liquid to a second location, said one location being disposed a distance above said second location, said apparatus comprising:

an enclosed receiver, at said first location,

inlet pipes connected to said enclosed receiver for introducing an inflow of liquid to said receiver at a rate at which there is always a head space in said receiver above the liquid therein,

A vacuum pump connected to said enclosed receiver for maintaining the head space in said receiver under a condition of vacuum sufficient to deaerate the liquid introduced in said receiver, and

barometric dropleg conduit means connecting said receiver to said second location for conveying at least a portion of the liquid inflow to the receiver to said second location, the condition of vacuum in said receiver and temperature of the liquid being such as to effect vacuum lift on said liquid in the dropleg conduit means and therewith maintain a level of said liquid in said dropleg conduit means a certain distance above said second location, characterized in that at least an upper portion length of said barometric dropleg conduit means comprises,

a plurality of outflow pipes extending upwardly within said receiver a distance from the bottom thereof, flow entry for liquid to at least one of said outflow pipes being at a different height relative to said receiver bottom than it is for another one of said pipes, each outflow pipe extending downwardly from said receiver for a predetermined distance and having a lower terminal end which is positioned below the minimum vacuum lift level of liquid maintained in said dropleg conduit means.

(Complete Specification 23 pages. Drawing 6 Sheets).

CLASS : 32C

153415.

Int. Class : A61k 27/00.

**"PROCESS FOR THE ISOLATION FROM NEEM OIL OF ACTIVE PRINCIPLES EVINCING OVIPOSITION DETERRENT ACTIVITY IN INSECTS".**

Applicant : COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH, Rash Marg, New Delhi-110001, India, an Indian registered body incorporated under the Registration of Societies Act (Act XXI of 1860).

Inventors : BHIMSFN ANNACHARYA NAGASAM-PAGI RAVINDRA NATH SHARMA, MANDAKINI MORESHWAR KUKARNI AND ASHOK SHRIJATI BHOSALE.

Application for patent no. 869/DEL/79 filed on 5th December, 1979.

Complete Specification left on 6th March, 1981.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

(6 Claims)

Process for the isolation from neem oil of active principles evincing oviposition deterrent activity in insects which comprises extracting neem seed oil with an organic solvent of the kind described herein, concentrating the extract, subjecting the concentrated extract to column chromatography over silica gel in order to fractionate it into a number of portions, re-chromatographing the first of said portions into at least twenty fractions, collecting the middle fractions, separating by filtration the solid content of said collected fractions, acetylating said filtered solid, removing the acetylated product in any known manner and recovering the non-acetylated residue as the desired active principle.

(Provisional Specification 4 pages. Complete Specification 6 Pages).

CLASS : 39B

153416.

Int. Class : C01d 7/00.

AN IMPROVED PROCESS FOR THE MANUFACTURE OF POTASSIUM CARBONATE FROM SODIUM CARBONATE USING ION-EXCHANGE TECHNIQUE".

Applicant : COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH, Rafi Marg, New Delhi-110001, India, an Indian registered body incorporated under the Registration of Societies Act (Act XXI of 1860).

Inventors : GOPAL TRIMBAK GADRE AND USHA KUMAR TIPNIS (MRS.)

Application for patent no. 870/DEL/79 filed on 5th December, 1979.

Complete specification left on 29th October, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

(3 Claims)

An improved process for the preparation of potassium carbonate from Sodium Carbonate using ion-exchange technique comprising eluting over a strong acid cation exchange resin in  $K^+$  a commercial sodium carbonate solution, concentrating the potassium carbonate solution obtained by evaporation, calcining the product to obtain solid potassium carbonate and regenerating the exhausted exchange resin in  $Na^+$  form with potassium chloride solution for reuse.

(Provisional specification 4 pages).

(Complete specification 5 pages).

CLASS : 39D & I.

153417.

Int. Class : C01g 45/00.

"IMPROVED PROCESS FOR THE PREPARATION OF ACTIVE MANGANESE DIOXIDE FROM PURE MANGANESE CARBONATE".

Applicant : COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH, Rafi Marg, New Delhi-110001, India, an Indian registered body incorporated under the Registration of Societies Act (Act XXI of 1860).

Inventors : SUKRITI BHUSAN KANUNGO & BHARAT RAMKRISHNA SANT.

Application for patent no. 871/DEL/79 filed on 5th December, 1979.

Complete specification left on 27th February, 1981.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

(9 Claims)

Improved process for the preparation of active manganese dioxide from pure manganese carbonate comprising treating ground ore with a sulphatising agent, roasting the reaction mixture, leaching the roasted mass with water, separating manganese sulphate solution by filtration and treating the filtrate with a soluble carbonate or bicarbonate to obtain manganese carbonate as precipitate, characterised in that the roasting of the reaction mixture is carried at a temperature range of 500 to 750°C the roasted mass is leached with hot water at 60°C—90°C and the manganese carbonate is calcined in the presence of air/oxygen to obtain pure manganese oxide and further leached with a dilute mineral acid to obtain active manganese dioxide.

(Provisional specification 11 pages).

(Complete specification 11 pages. Drawings 2 sheets).

CLASS : 61K, 173A

153418.

Int. Class : B01d 1/00.

"A SPRAY DRYER

Applicant : STAINCO ENTERPRISES PVT. LTD., Nehru Place, New Delhi-110019, India, an Indian Company.

Inventor : NIRANJAN DAS GUPTA.

Application for patent no. 872/DEL/79 filed on 5th December, 1979.

Complete Specification left on 12th February, 1981.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

(6 Claims)

A spray dryer for drying and converting a liquiduous feedstock comprising a tower having means for introduction of the feedstock and a drying fluid said drying fluid having a high velocity, said feedstock being introduced at a low pressure so that an atomization and drying of the feedstock is caused by said drying fluid, said tower having at least one outlet connected to a primary cyclone separator for removal of the fluid from the feedstock flowing within said tower.

(Provisional Specification 6 pages).

(Complete Specification 10 pages. Drawing 1 Sheet).

CLASS : 61K & 173 A

153419.

Int. Class : B01d 1/00.

"A PROCESS FOR SPRAY DRYING OF A FEEDSTOCK".

Applicant : STAINCO ENTERPRISES PVT. LTD., Nehru Place New Delhi-110019, an Indian Company.

Inventor : NIRANJAN DAS GUPTA.

Application for patent no. 873|Del|79 filed on 5th December, 1979.

Complete specification left on 12th February, 1981.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

(7 Claims)

A process for spray drying of feedstock in suspension, paste or emulsion from which comprises in atomizing and drying the feedstock, removing moisture from said feedstock and separating the drying fluid from said dried feedstock characterized in that the step of atomization is effected by the same drying fluid as that used for effecting the step of drying.

(Provisional specification 6 pages).

(Complete specification 12 pages. Drawing 1 sheet).

CLASS : 166A

153420.

Int. Class : B63j 5/00.

"LADDER".

Applicant : THE LAITRAM CORPORATION, of 220 Laitram Lane, Harahan, Louisiana 70123, United States of America, a corporation of the State of Louisiana, United States of America.

Inventor : JAMES MARTIAL LAPEYRE.

Application for patent no. 877|DEL|79 filed on 5th December, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

(20 Claims)

A ladder comprising :

a single central tread support member adapted for mounting between an upper level and a lower level at a predetermined angle of inclination;

a plurality of tread members disposed in alternating arrangement on respective sides of said central tread support member, each of said tread members having a foot support portion outwardly extending from said central tread support member, and each of said tread members having rail support means outwardly extending from the foot support portion and terminating substantially in a plane forward and parallel to a plane passing through the front edges of the foot support portion; and

first and second handrails each attached to said rail support means.

(Complete Specification 15 pages. Drawing 10 Sheets).

CLASS : 34A

153421.

Int. Class : B01d 13/04.

"PROCESS FOR CONVERTING HYDROPHILIC, WATER CONTAINING REGENERATED CELLULOSE MEMBRANES TO MEMBRANES USEFUL FOR SEPARATING ORGANIC LIQUIDS".

Applicant : EXXON RESEARCH AND ENGINEERING COMPANY, a corporation of Delaware, United States of

America, carrying on business as a company for the holding of patents and granting licenses thereunder, and technical development and research work at 200 Park Avenue, Florham Park, New Jersey, United States of America.

Inventors : JOHN ARTHUR THOMPSON, DAVID HENRY SHAW AND DAVID ARVYDAS GUDELIS.

Application for patent no. 878|DEL|79 filed on 5th December, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

(7 Claims)

A process for converting hydrophilic, water containing regenerated cellulose membranes having a molecular weight cut-off of 6000 or less to membranes useful for separating organic liquids which converting process consists essentially of sequentially permeating the water-containing membrane with one or more solvents of decreasing polarity in turn, under pressure, to first displace the water in the membrane with a first solvent followed by sequentially displacing each preceding solvent in the membrane with the next, successive solvent of lower polarity, wherein said first solvent is a C<sub>1</sub>-C<sub>4</sub> alcohol or acetone which exhibits bulk liquid-liquid miscibility with both the water in the regenerated cellulose membrane and the next lower polarity solvent immediately following said first solvent and wherein any two adjacent solvents in the sequential series exhibit bulk liquid-liquid miscibility with each other and wherein the final solvent exhibits bulk liquid-liquid miscibility with the material ultimately desired to be selectively permeated through the membrane.

(Complete Specification 30 pages. Drawing 3 Sheets).

CLASS : 144E

153422.

Int. Class : C09d 3/00, 5/00.

"COMBUSTIBLE OBJECTS, IN PARTICULAR COMBUSTIBLE CARTRIDGE CASSES, WHICH ARE HEAT RESISTANT TO SELF IGNITION".

Applicant : SOCIETE NATIONALE DES POUDRES ET EXPLOSIVES, of 12, Quai Henri IV-75181 Paris Cedex 04, France, a French Company.

Inventors : REMY RENE CHARLES LIPPLER, ANDRE JACQUES MENGELE & JACQUES PLAZANET.

Application for patent no. 879|Del|79 filed on 5th December, 79.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

(9 Claims)

A combustible object, in particular combustible cartridge case, which is heat resistant, characterised in that it is covered with a thin layer of varnish, based on an organic binder, containing hollow microbeads of the kind such as herein described the said varnish being based on a binder chosen from the group comprising chlorinated rubbers, polyvinylidene chloride, cellulosic binders, glycerophthalic binders, polyurethane resins and polyepoxy resins.

(Complete specification 16 pages).

CLASS : 27GIE.

153423

Int. Cl. E04b 1|00, 1|19, E04c 3|00.

"IMPROVED MODULES WITH THREE DIMENSIONAL SPACE JOINT DEVICE FOR USE IN THE FABRICATION OF STRUCTURES".

Applicant : COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH, RAFI MARG, NEW DELHI-1, INDIA, AN INDIAN REGISTERED BODY INCORPORATED UNDER THE REGISTRATION OF SOCIETIES ACT (ACT XXI OF 1860).

Inventors : EBRAHIM ABDUL KARIM, PALLASENA RANGANATHAN NATARAJAN, SETHUNARAYA NAN SETHUNRAYANAN ANGELUS CASMIR RAVINDRANATH DJUGASH.

Application for patent No. 880|Del|79 filed on 6th December, 1979.

Complete specification left on 12th November 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972) Patent Office Branch, New Delhi-110 005.

6 Claims.

An improved pyramidal module with three dimensional space joint device for use in the fabrication of structures comprising a system of elongate top members arranged to form the base of the pyramid and a system of elongate diagonal members connected to the ends of said top members and to one another at the apex of the pyramid, the end of each pair of contiguous top members being connected to the end of each diagonal members by connection means comprising the combination of a vertical plate and a horizontal plate in such a way that no two adjacently located connection means are at the same level, each said horizontal plate being provided with a centrally disposed aperture adapted to act as a bolt hole, the ends of the diagonal members forming the apex being connected to each other through the medium of a horizontal plate.

(Provisional specification 8 pages).

Complete specification 12 pages, Drawing 9 Sheets.

CLASS : 39K, 70C

153424.

Int. Cl. C01b 11|00.

"PROCESS FOR THE ELECTROLYTIC PRODUCTION OF SODIUM CHLORATE".

Applicant : P. C. U. K. PRODUITS CHIMIQUES UGINE KUHLMANN, A FRENCH COMPANY OF TOUR MAN HATTAN—LA DEFENSE 2, 5 & 6, PLACE DE L'IRIS, 92400 COURBEVOIE, FRANCE.

Inventors : ROGER CHARVIN AND JEAN-LOUIS PIGNAN.

Application for patent No. 886|DEL|79 filed on 11th December, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972) Patent Office Branch, New Delhi-110 005.

2 Claims.

Process for the electrolytic production of sodium chlorate on metal anodes coated with platinum, iridium or ruthenium oxide while improving the Faraday yield which comprises adding phosphoric acid to the hydrochloric acid to maintain the optimum operational pH, in a quantity of 1 to 2kg of 85% acid per tonne of sodium chlorate produced.

Complete specification 8 pages.

CLASS : 32F<sub>4</sub>(a).

153425.

Int. Cl. C07c 79|00.

"NEW PROCESS FOR THE PREPARATION OF MONONITRO-1, 2, 3, 4-TETRAHYDRO-ANTHRAQUINONES".

Applicant : PCUK PRODUITS CHIMIQUES UGINE KUHLMANN, A FRENCH COMPANY OF TOUR MAN HATTAN—LA DEFENSE 2, 5 & 6, PLACE DE L'IRIS, 92400 COURBEVOIE, FRANCE.

Inventors : PIERRE TELLIER, BERNARD DUBREUX & SERGE YVON DELAVARENNE.

Application for patent No. 887|Del|79 filed on 11th December, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972) Patent Office Branch, New Delhi-110 005.

12 Claims.

Process for the preparation of mononitro derivatives of 1, 2, 3, 4-terahydro-anthraquinones from 1, 4, 4a, 9a-tetrahydro-anthraquinone characterised in that the 1, 4, 4a, 9a-tetrahydro-anthraquinone is previously subjected to a thermal treatment in an inert atmosphere, in the absence of reducing or oxidising agents, in the presence of a hydrogenation catalyst which leads to a mixture of anthraquinone, 1, 2, 3, 4-tetrahydro-9, 10-anthracenediol and 1, 2, 3, 4-tetrahydro-anthraquinone : the anthraquinone by product and the catalyst are separated and the mixture of 1, 2, 3, 4-tetrahydro-9, 10-anthracenediol and 1, 2, 3, 4-tetrahydro-anthraquinone obtained is subjected to a nitration reaction.

Complete specification 9 pages.

CLASS : 144B.

153426.

Int. Cl. C23D 5|00.

"A METHOD FOR PRODUCING A PROTECTIVE COATING FOR CATHODICALLY PROTECTED SURFACES".

Applicant : OLGA MEYER AND RAINER MEYER OF RHEinstrasse 64, 7580 BIIH, FEDERAL REPUBLIC OF GERMANY, BOTH GERMAN SUBJECTS.

Inventors : INER-LEO MEYER, EINMER JOHN AND BERNHARD EISENHAUR.

Application for Patent No. 893|Del|79 filed on 14th December, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972) Patent Office Branch, New Delhi-110 005.

10 Claims.

A method for producing a protective coating for cathodically protected surfaces, comprising a base coating and a cover coating, in which the base coating includes a zinc powder base coating capable of hardening or curing under ambient air humidity, comprising the following steps :

- (a) forming the base coating by mixing 6-10 parts polysiocyanate-prepolymer with an NCO content of about 16% and capable of hardening under ambient humidity,
- 7-9 parts high boiling point aromatic solvent,
- 0.01-0.03 parts deactivation substance,
- 0.3-0.8 parts drying and stabilizing substance,
- 3-6 parts gelling substance,
- 0.3-0.5 parts wetting agent,
- 4-7 parts pigment in flake form and
- 65-75 parts zinc powder and

(b) forming the cover coating, which comprises a polyurethane coating capable of hardening under ambient air humidity by mixing 16-20 parts aromatic polyisocyanate with an NCO content of 5-7%,  
 1-3 parts liquid higher molecular polyisocyanate with an NCO content of 3-4%,  
 5-20 parts tar with a viscosity of 5600 to 6400 poise@25°C,  
 6-8 parts drying agent  
 0.05-0.1 parts deaeration agent,  
 3-5-4.5 parts precipitation prevention agent,  
 30-40 parts micaceous iron ore or hematite powder,  
 5-10 parts inorganic filler, and  
 2-5 parts stabilizing agent  
 whereby all parts being by weight.

Complete specification 18 pages.

CLASS : 98H.

153427.

Int. Cl. G05d 23/24.

"A SENSING MEMBER FOR A THERMOSTAT AND TO A PROCESS FOR THE MANUFACTURE THEREOF".

Applicant : THERMO CONTROLS, A PARTNERSHIP FIRM OF 11, VENDHNA BUILDING, 11, TOLSTOY MARG, NEW DELHI-110001, INDIA, AN INDIAN REGISTERED PARTNERSHIP FIRM, WHOSE PARTNERS ARE SANJOY GUJRAL, KRISHAN PRAKASH SETHI (H.U.F.) BEHARAM ARDESHER MEHER-HOMJI, HILLA SHROFF, AMITA KHANNA, KRISHAN PRAKASH KAPOOR, (H.U.F.) AND KAVITA DHAWAN, ALL INDIAN CITIZENS OF THE ABOVE ADDRESS.

Inventor : KRISHAN PRAKASH SETHI.

Application for patent No. 898/DEL/79 filed on 15th December, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972) Patent Office Branch, New Delhi-110 005.

5 Claims.

A process for manufacture of a sensing member for use in a thermostat, which comprises in holding the proximal end of the said tube in a hole in a base plate by introducing under pressure an oversize distance member into the proximal end of said tube, introducing the said rod having a low coefficient of expansion within said tube to project beyond the proximal end of said tube and into said hole of the base plate, securing an arm to said rod at the end thereof extending beyond the proximal end of said tube, and swaging the distal end of said tube.

Complete specification 10 pages.

Drawing 1 Sheet.

CLASS : 98H.

153428.

Int. Cl. G05d 23/24.

"A SENSING MEMBER FOR A THERMOSTAT AND A PROCESS FOR THE MANUFACTURE THEREOF".

Applicant : THERMO CONTROLS, A PARTNERSHIP FIRM OF 11, VANDHNA BUILDING, 11, TOLSTOY MARG, NEW DELHI-110001, INDIA, AN INDIAN REGISTERED PARTNERSHIP FIRM, WHOSE PARTNERS ARE SANJOY GUJRAL, KRISHAN PRAKASH SETHI (H.U.F.) BEHARAM ARDESHER MEHER-HOMJI, HILLA SHROFF, AMITA KHANNA, KRISHAN PRAKASH KAPOOR (H.U.F.) AND KAVITA DHAWAN, ALL INDIAN CITIZENS, OF THE ABOVE ADDRESS.

Inventor : KRISHAN PRAKASH SETHI.

Application for patent No. 899/DEL/79 filed on 15th December, 1979.

Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972) Patent Office Branch, New Delhi-110 005.

7 Claims.

A sensing member for a thermostat comprising a tube with a rod having a low coefficient of expansion disposed therein, said rod and said tube each having a distal end and a proximal end, the proximal end of said rod extending beyond the proximal end of said tube, a base plate secured to said tube with the proximal end of said rod, projecting through a hole in said base plate, a distance insert disposed within said tube and at the proximal end thereof, an arm secured to the proximal end of said rod said proximal end of the tube having a flared formation by introducing said distance insert having an oversize so as to hold the base plate to said tube.

Complete specification 10 pages.

Drgs. 1 sheet.

CLASS : 65B.

153429.

Int. Cl. H01f 21/12.

"THREE-PHASE LOAD SELECTOR FOR A TAPPED TRANSFORMER".

Applicant : MASCHINENFABRIK REINHAUSEN GE-BRUDER SCHEUBECK GMBH & CO KG, OF FALKENSTEINSTRASSE 8, 8400 REGENSBURG, FEDERAL REPUBLIC OF GERMANY, A COMPANY ORGANISED UNDER THE LAWS OF THE FEDERAL REPUBLIC OF GERMANY.

Inventor : ALEXANDER BLEIBTREU.

Application for patent No. 222/DEL/80 filed on 26th March, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972) Patent Office Branch, New Delhi-110 005.

7 Claims.

A three-phase load selector for a tapped transformer, the load selector comprising an upright cylindrical oil vessel, a plurality of stationary tap contacts arranged at the interior wall of the vessel, a carrier shaft which is of electrically insulating material and which is mounted in the vessel to be rotatable about the axis thereof, a plurality of movable tap contacts arranged on the carrier shaft to be co-operable with the stationary tap contacts, first drive means arranged at one end of the vessel and operable to rotate the carrier shaft in steps, a plurality of sets of stationary reversing contacts mounted on the interior wall of the vessel, three contacts bridging means angularly spaced around the carrier shaft and disposed between the first drive means and the movable tap contacts, and second drive means arranged at the end of the carrier shaft nearest said one end of the vessel and operable to angularly displace the contact bridging means, around the carrier shaft, each of the contact bridging means comprising respective support, which is of electrically insulating material and which extends in the longitudinal direction of the carrier shaft, and a substantially U-shaped bridging contact, which is arranged at the end portion of the support remote from said one end of the vessel to be co-operable with a respective one of the sets of stationary reversing contacts.

Complete specification 7 pages.

Drg. 1 sheet.

CLASS : 65B.

153430.

Int. Cl. H01f 21/12.

## "IMPROVEMENTS IN OR RELATING TO A TAP SWITCH FOR A TAPPED TRANSFORMER".

Applicant : MASCHINENFABRIK REINHAUSEN GE-BRUDER SCHEUBECK GMBH & CO KG., OF FALK-ENSTEINSTRASSE 8, 8400 REGENSBURG, FEDERAL REPUBLIC OF GERMANY, A COMPANY ORGANISED UNDER THE LAWS OF THE FEDERAL REPUBLIC OF GERMANY.

Inventor : ALEXANDER BLIBITREU.

Application for patent No. 223/DEL/80 filed on 26th March, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972) Patent Office Branch, New Delhi-110 005.

## 2 Claims.

A tap switch for a tapped transformer, the tap switch comprising a cylindrical wall, a plurality of discrete contacts disposed on the wall and spaced apart along a first circularly arcuate path around the inside of the wall, a continuous contact track disposed on the wall and extending along a second circularly arcuate path around the inside of the wall and coaxial with the first path, and contact bridging means movable to electrically connect selectable ones of the discrete contacts with the contact track and comprising two arms displaceable independently of each other, a respective contact roller rotatably arranged on each of the arms so as to be capable of rolling along a respective one of the paths on movement of the contact bridging means, and an electrically conductive connector inter-connecting the rollers, the connector being connected to each roller axially thereof and being flexible to permit independent displacement of the arms so that the loci of the rollers during movement of the contact bridging means can adapt to any deviation of the paths from concentricity.

Complete specification 5 pages.

Drg. 1 sheet.

CLASS : 195D &amp; 6A.

153431.

Int. Cl. F16k 45/00.

## "AN IMPROVED VALVE ASSEMBLY FOR THE REGULATION AND CONTROL OF THE FLOW OF AIR OR GAS UNDER PRESSURE".

Applicant : KRISHAN GOPAL KHOSLA, OF 11 PRITHVI RAJ ROAD, NEW DELHI, INDIA, AN INDIAN CITIZEN.

Inventor : KRISHAN GOPAL KHOSLA.

Application for patent No. 495/DEL/80 filed on 3rd July, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972) Patent Office Branch, New Delhi-110 005.

## 11 Claims.

An improved valve assembly for the regulation and control of the flow of air or gas under pressure which comprises a valve chamber having a pair of oppositely disposed annular ports located within the vertical walls of said chamber, said ports communicating with first and second outflow means respectively for the exit of compressed air or gas, each of said outflow means being connected to separate pressure inducing means whereby pressure can be applied alternately to either outflow means in the direction of a port

opening, an inlet located at or near the base of the valve chamber for the introduction of compressed air or gas, an elongate recess provided in each of the vertical walls of the chamber wherein the ports are located, valve support means located within and extending between said recesses, said valve support means being freely rotatable and axially movable within said recesses, a valve mounted rigidly upon said valve support means, said valve comprising a solid cylinder the ends of which are substantially in the form of truncated cones the bases of said cones forming the valve faces, said valve being provided with an axial bore adapted to be engaged by the valve support means, and a pair of annular valve seats provided at or near the port openings in the interior of the valve chamber, each seat being adapted to be engaged by one of the valve faces, each valve face being provided with an annular sealing element for facilitating a leak-proof seal of the respective port, wherein when the pressure inducing means applies pressure within the first outflow means, said pressure acting through the adjacent port on the near face of the valve causes such valve and the valve support means to which it is connected to slide axially in the opposite direction and close the far port and when at a predetermined signal the pressure inducing means switches the pressure to within the second outflow means, the reverse takes place with the near port being closed by the valve face and the far port being opened, the compressed air or gas being introduced into the chamber from the inlet acting on the external periphery of the valve to maintain it in position against the respective port opening.

Complete specification 13 pages.

Drg. 1 sheet.

CLASS : 6A, &amp; 61 A, E.

153432.

Int. Class : F32b 23/00.

## "IMPROVED DRIER UNIT FOR COMPRESSED AIR OR GAS".

Applicant : KRISHAN GOPAL KHOSLA, OF 11 PRITHVI RAJ ROAD, NEW DELHI, INDIA, AN INDIAN CITIZEN.

Inventor : KRISHAN GOPAL KHOSLA.

Application for patent No. 831/DEL/80 filed on 25th November, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972) Patent Office Branch, New Delhi-110 005.

## 14 Claims.

An improved air drier unit for the dehumidification of compressed air or gas comprising a pair of vessels filled or substantially filled with a desiccant and adapted to be operated in sequence so that, while air is being dehumidified in one, spent desiccant is being regenerated in the other and vice versa, heating means adapted to heat each vessel and its contents, inflow means connected to both vessels for the passage of moist air, first control valve means provided with said inflow means for directing said air alternately to one or other of said vessels, outflow means connected to each vessel for the exit of demoisturised air which has been dried by passage through the desiccant in said vessels, second control valve means provided with said outflow means for permitting the exit of dried air alternately from one or other of said vessels, by pass means adapted to deliver dried air existing from the dehumidifying vessel to the vessel regenerating desiccant, valve means connected to each vessel and adapted to be actuated in response to a determined signal for controlling the build-up of pressure within and the release of pressure from the vessel regenerating desiccant when said pressure equals the pressure in the dehumidifying vessel, said valve means being connected to said inflow and outflow means whereby the release of pressure from said vessel regenerating desiccant causes said first and second control valve means to change direction thereby enabling the two vessels of the air drier unit to reverse their functions.

Complete specification 13 pages.

Drgs. 2 sheets.

CLASS : 195 B & 6A<sub>2</sub>.

153433.

Int.Cl. F16k 21/00.

"AN IMPROVED NON-RETURN VALVE ASSEMBLY".

Applicant : KRISHAN GOPAL KHOSLA, OF 11 PRITIVI RAJ ROAD, NEW DELHI, INDIA, AN INDIAN CITIZEN.

Application for patent No. 832|Del|80 filed on 25th November, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972) Patent Office Branch, New Delhi-110 005.

11 Claims.

An improved non-return valve assembly adapted to permit the flow of air or gas in one direction but to prevent effectively any flow in the reverse direction which comprises a valve chamber having an inlet port and an outlet port located within the walls of said chamber and disposed opposite each other, said ports communicating with inflow and outflow means respectively for compressed air or gas and elongate recess provided in each of the vertical walls of the chamber wherein the ports are located, valve support means located within and extending between said recesses, said valve support means, being freely rotatable and axially movable within said recesses, a valve body comprising a solid cylinder the ends of which are in the form of truncated cones mounted rigidly on said valve support means, the base of the cone nearer the outlet port being provided with a recess adapted to house a torsion spring located about the valve support means and abutting the wall of the chamber containing said outlet port, said spring being adapted to maintain the valve body in pressurised relation, while the base of the opposite cone constitutes a valve face adapted under the pressure of the oppositely acting spring to engage an annular valve seat provided at or near the inlet port in the interior of the valve chamber, said valve face being provided with an annular sealing element for facilitating internal leak proof seal of the inlet port.

Complete specification 9 pages.

Drawing 1 sheet.

CLASS 188

153434.

Int. Cl. C 23 c 11/00

A DEVICE RELATING TO COLD GLOW PLASMA FOR THE DEPOSITION AND ETCHING OF THIN FILMS.

Applicant : INDIAN INSTITUTE OF TECHNOLOGY, I.I.T. P.O., MADRAS-600 036.

Inventor : RAVUNNIJARATH RAMACHANDRAN.

Application No. 86|Mas|81 filed April 30, 1981.

Appropriate office for Opposition Proceedings, (Rule 4, Patents Rules, 1972), Patent Office, Madras Branch.

4 Claims

A device relating to cold glow plasma for the deposition and etching of thin films comprising a gas source connected to a reactor provided with pressure control means; a glass plasma shield and an annular ring with equispaced holes for fine dispersion of gas within the reactor; a radio frequency coil wound around the reactor and connected to a radio frequency generator whereby the gas is ignited at ambient temperature by radio frequency energy; an evacuated and purged pressure vessel provided between the gas source and the reactor, the gas from the pressure vessel being introduced into the reactor by a leak valve; a solenoid operated valve provided between the gas source and the pressure vessel; and

metered needle valves provided for the gas source for maintaining a fine control over the flow of gases from the said source to the reactor.

Com. 7 pages

Drwg. 1 sheet

CLASS 39E

153435

Int. Cl. C 01 g 37/00.

A PROCESS FOR THE MANUFACTURE OF SODIUM CHROMATE.

Applicant &amp; Inventor : MADHAVAN PARTHASARATHY, T-80, 5TH MAIN ROAD, ANNANAGAR, MADRAS-600 040, TAMIL NADU.

Application No. 107/Mas/81 filed May 30, 1981.

Appropriate office for Opposition Proceedings, (Rule 4, Patents Rules, 1972), Patent Office, Madras Branch.

3 Claims. No drawing.

A process for the manufacture of sodium chromate comprising the preparation of a mixture containing soda ash, chrome iron ore and limestone in finely divided form, characterised by the preparation of briquettes of the said mixture admixed with filter mud such as herein described; feeding the briquettes into a vertical kiln of the shaft type along with coal having an ash softening temperature substantially above 1200°C, with the briquettes and the coal disposed in alternate layers; and allowing the reaction to take place in the presence of air in the heated kiln, to yield sodium chromate which is subsequently recovered from the reaction mixture, by known methods.

(Com.—6 pages).

CLASS : 68E<sub>2</sub> + 113H

153436.

Int. Cl. : H 05 b 35/00 + 37/00 + 39/00.

AN ELECTRIC STREETLIGHTING SYSTEM WHEREIN STREETLIGHTS ARE SWITCHED ON AND OFF FROM A SINGLE CONTROL POINT.

Applicant &amp; Inventor : NAGARAJAN BHAGAVATHESWARAN, TC. 22|821, SIVANCOIL STREET, KARAMANA, TRIVANDRUM-695002, KERALA.

Application No. 152/Mas/81 filed August 31, 1981.

Complete Specification left October 6, 1981.

Appropriate office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office, Madras Branch.

(2 Claims)

An electric streetlighting system wherein streetlights are switched on and off from a single control point comprising a plurality of street main circuits with their corresponding streetlight sections; and known means provided for the first street main circuit for switching the same on and off and for thus energising and de-energising the streetlight sections thereof, characterised by a first relay connected to the first street main circuit, the contacts of the said relay being included in a set of one or more of other street main circuits, whereby the said set is switched on or off by the first relay whenever the first street main circuit is switched on or off, to thus energise or de-energise the streetlight sections of the said set; and one or more other relays connected to one or more of the street main circuits of the said set, the contacts of the said other relays being included in such of the remaining street main circuits wherein the contacts of the first relay have not already been included, whereby the said remaining street main circuits are switched on or off by the said other relays whenever the first street

main circuit is switched on or off, to thus energise or de-energise the streetlight sections of the said remaining street main circuits.

(Com. 5 pages; Drawings. 1 sheet)

CLASS : 32E

153437.

Int. Cl. : C 08 g 17/02.

**A PROCESS FOR PRODUCTION OF FIRE RETARDANT RIGID POLYURETHANE FOAM.**

Applicant : INDIAN SPACE RESEARCH ORGANISATION, DEPT. OF SPACE, F BLOCK, CAUVERY BHAVAN, DISTRICT OFFICE ROAD, BANGALORE, KARNATAKA.

Inventors : (1) KENTHAPADI NANNAIER GOVINDARAMAN (2) VALIA VALAPPIL KARUNAKARAN.

Application No. 172/Mas/81 filed September 18, 1981.

Appropriate office for Opposition Proceedings (Rule 4, Patents Rules, 1982), Patent Office, Madras Office.

(18 Claims. No drawing)

A process for the production of fire retardant rigid polyurethane foam comprising the steps of:

- (a) admixing a known polyhydroxyester resin with a known gasification catalyst, a known gelling catalyst, antimony trioxide, tricresyl phosphate and water,
- (b) adding the resultant admixture of step (a) to an isocyanate as herein described in the presence of a known blowing agent, and a known foam stabiliser,
- (c) transferring the resultant creamy mass obtained at the end of step (b) into a container wherein it transforms itself into foam which is allowed to rise to its full height,
- (d) allowing said foam to stand till it becomes tack-free, and thereafter,
- (e) removing in a known manner the rigid foam from said container.

Reference has been made to Indian Patent No. 149900.

(Com. 9 pages).

IND. CLASS : 107B

153438.

Int. Class : F02b - 15/00 & 17/00.

**Title : IMPROVED 'WANKEL' TYPE ROTARY PISTON ENGINE.**

Applicant & Inventor : VISWANATH DATTATREYA HUKERIKAR SUKHADIA BHUVAN, DAKOR (GUJARAT STATE) INDIA.

Application No. 327/BOM/2980 filed Oct 30, 1980.

Complete after provisional filed on JAN 13, 1981.

Appropriate office for Opposition Proceeding (Rule 4, Patents Rule, 1972), Patent Office, Bombay Branch.

(3 Claims)

1. An "improved 'Wankel' type rotary piston engine" comprising a conventional 'Wankel' engine from which the spark ignition equipment is replaced by a fuel pump and injector; an auxiliary cylinder having a swash plate operated reciprocating piston is attached to the main cylinder the

4—147 GI/84

aid two cylinders are connected by a valve; the arrangement being such that the compression strokes in the main and auxiliary cylinders start and terminate at the same time so as to provide a compression ratio that is sufficient for the auto ignition of the fuel that is injected at the end of the compression stroke, which is achieved by the said swash plate being controlled by a driving system from the crank shaft of the Wankel engine.

Complete specification 9 pages, Drawings sheet 3.

Provisional specification 2 pages, Drawings sheet nil.

IND. CLASS : 131 B<sub>1</sub> + 131 B<sub>2</sub> 153439.

Int. Class : E 21 C - 13/00+17/00; B 23 d - 77/00.

**Title : A BUTTON TYPE ROCK REAMING BIT ASSEMBLY.**

Applicant : SANDVIK ASIA LIMITED, A COMPANY INCORPORATED UNDER THE COMPANIES ACT, 1956 AND HAVING ITS REGISTERED OFFICE AT BOMBAY-POONA ROAD, POONA-411012, MAHARASHTRA, INDIA.

Inventor : ANIL VASANT PRADHAN.

Application No. 374/BOM/1980 filed December 2, 1980.

Complete after provisional left on February 11, 1982.

Appropriate office for Opposition Proceeding Rule 4, Patents Rule, 1972, Patent Office, Bombay Branch.

(4 Claims)

A button type rock reaming bit assembly comprising a pilot body and skirt all integral and a shank rod threaded into the said skirt; the said pilot has two side flushing holes; the said body has three side flushing holes and six carbide buttons fitted on its top face, the said skirt has a central flushing hole connected with the said side flushing holes in the body and pilot and internal rope threads matching with external rope threads provided on the said shank rod; the arrangement being such that the skirt of the bit is firmly fitted to the shank rod with the help of the said rope threads, so that it cannot get lost in the reamed hole and the rock crushed due to the impact energy transmitted from the shank rod to the bit being flushed through the side flushing holes in the body and the pilot of the bit with compressed air coming through the central hole in the shank and skirt.

(Provisional specification 3 pages, Drawings 2 sheets).

(Complete specification 6 pages, Drawings 3 sheets).

IND. CLASS : 167 C

153440.

Int. Cl. : B07b-11/00+15/00.

**Title : AN EQUIPMENT FOR CLEANING GRAINS, SEEDS OR THE LIKE.**

Applicant : THERMAX PRIVATE LIMITED, OF CHINCHWAD, POONA-411019, MAHARASHTRA, INDIA. AN INDIAN COMPANY.

Inventor : ROHINTON DHONIJISHAW AGA.

Application No. 92/BOM/1981 filed on Apr. 3, 1981.

Complete after Provisional left on July 2, 1982.

Appropriate office for Opposition Proceedings Rule 4, Patents Rule, 1972, Patent Office, Bombay Branch.

## (10 Claims)

An equipment for cleaning grains, seeds or the like comprising a hollow frame or body containing a feeding chamber or zone having a feed hopper and a distributing means in said hopper, a filtering chamber or zone below and communicating with the feeding chamber or zone and having a rotascalper (perforated or wiremesh rotating cylinder) an oversized foreign materials outlet and a distributing means below the rotascalper, an aspiration chamber or zone adjoining the filtering chamber or zone and having at least one induced draft fan, a light foreign materials inlet which communicates with the filtering chamber or zone and a light foreign materials outlet, a screening chamber or zone below and communicating with the filtering chamber or zone and having an inclined screen provided with a box at its bottom and a vibrating or shaking means, the box being open at its lower end and a container being provided below the open end of the box for collection of undersized foreign materials and grains, seeds or the like, the screening chamber or zone further having a cleaned grains, seeds or the like outlet which is at the same level as the lower end of the said screen and a prime mover connected to each of the said distributing means, rotascalper and vibrating or shaking means for driving them.

(Provisional specification 5 pages. Drawing 1 sheet).

(Complete specification 9 pages. Drawing 2 sheets).

IND. CLASS : 190 D 153442.

Int. Class : F03d 11/00.

Title : AN IMPROVED WIND MILL HAVING VARIABLE STROKE INCHING DEVICE FOR ITS CRANK ASSEMBLY.

Applicant & Inventor : CHANDRAKANT GANAPAT-RAO CHURY, PRECISION INDUSTRIAL PRODUCTS, BLOCK NO. 248, MADHANI INDUSTRIAL ESTATE, SENAPATI BAPAT ROAD, DADAR, BOMBAY-400028.

Application No. 191BOM/81 filed on July 1, 1981.

Appropriate office for Opposition Proceedings (Rule 4, Patents Rule, 1972), Patent Office, Bombay Branch.

## (1 Claim)

1. An improved wind mill having variable stroke inching device for its crank plate, fixed at one end to the rotor having fan blades to be rotated by wind velocity, the other end of which is connected to the connecting rod through a crank pin, characterised in that the said crank plate is provided with serrations on its upper surface, a recess on the lower surface and a longitudinal through slot; there is housed in the said slot an internally threaded 'T' screw the shank of which in turn passes into the crank pin, the said crank pin is provided on its lower surface correspondingly matching serrations for fitting over the serrations of the said crank plate, and a fastening screw passing through the said crank pin and ending into the said 'T' screw, arrangement being such that on loosening the said fastening screw the position of the lower end of the connecting rod connected to the crank pin is changed by shifting the said crank pin over the said serrated portion of the said crank plate along with 'T' screw sliding in the slot to accomplish change in distance from the rotor, thereby adjusting the stroke.

(Complete specification 7 pages. Drawing 2 sheets).

IND. CLASS : 32F<sub>1</sub> + 32F<sub>2</sub>b + 55F<sub>1</sub> + 55F<sub>4</sub> 153442.

Int. Class : 61 k 23,00.

A PROCESS FOR THE PREPARATION OF NOVEL CHEMOTHERAPEUTIC BIS AMIDINE DERIVATIVES OF SUBSTITUTED PHENANTHRIDINE AND PHARMACEUTICALLY ACCEPTABLE SALTS THEREOF.

Applicant : HOECHSTI PHARMACEUTICALS LIMITED OF HOECHSTI HOUSE NARIMAN POINT 193, BACK-BAY RECLAMATION BOMBAY-400 021 MAHARASHTRA INDIA.

Inventors : 1. DR. BALBIR SINGH BAJWA, 2. DR. DIPAK KUMAR CHATTERJEE, 3. DR. BIMAL NARESH GANGULI, 4. DR. NOEL JOHN DE SOUZA, 5. DR. JURGEN RIEDEN.

Application no. 344BOM/81 filed on December 22, 1981.

Complete after provisional left on December 21, 1982.

Appropriate office for Opposition Proceedings (Rule 4, Patents Rule, 1972), Patent Office, Bombay Branch.

## (5 Claims)

1. A process for the preparation of novel chemotherapeutic bisamidine derivatives of substituted phenanthridines of the formula I shown in the drawings accompanying the provisional specification, in which R stands for hydrogen atom C<sub>1-4</sub> alkyl group C<sub>1-8</sub> alkoxy group, halogen atom, nitro group or amino group A stands for C(R<sub>1</sub>)NR<sub>2</sub>R<sub>3</sub>, in which R<sub>1</sub> stands for hydrogen atom, alkyl group or substituted alkyl group, each of R<sub>2</sub> and R<sub>3</sub> stands for hydrogen atom or alkyl group 2<sub>2</sub> and R<sub>3</sub> when taken together with the nitrogen atom to which they are bound, stand for a heterocyclic group, R<sub>1</sub> and R<sub>2</sub> when taken together with the carbon atom and the nitrogen atom to which they are bound, stand for a heterocyclic group X stands for hydrogen atom, halogen atom, alkoxy group, amino group, monoalkylamino group, dialkylamino group or a nitrogen heterocyclic group, containing optionally a second nitrogen, oxygen or sulphur atom and their pharmaceutically acceptable salts, said process comprising reacting a compound of the formula III shown in the drawings accompanying the provisional specification, in which R and X have the aforementioned meanings with phosphorous oxychloride and an amide of the formula R<sub>1</sub>CNR<sub>2</sub>R<sub>3</sub>, in which R<sub>1</sub> R<sub>2</sub> and R<sub>3</sub> have the

8

aforementioned meanings, and if desired converting the resulting compound of the said formula I into pharmaceutically acceptable salt in a known manner.

(Prov. spec. 11 pages. Drgs. 2 sheets).

(Comp. spec. 13 pages. Drgs. nil).

CLASS : 85B.

153443.

Int. Cl. F27d 11/16.

## FLAME GUNTING LANCE.

Applicants : (1) DONETSKY NAUCHNO-ISSIEDOVATELSKY INSTITUT CHERNOI METALLURGIYI OF DONETSK, BULVAR SHEVCHENKO, 26, USSR, (2) KARAGANDINSKIY METALLURGICHESKIY KOMBINAT, OF TEMIR-TAU, PROSPERKT LENINA, 1, USSR AND (3) ZHDANOVSKY METALLURGICHESKIY ZAVOD "AZOVSTAL", OF ZHDANOV DONETSKOI OBLASTI, USSR

Inventors : 1. VENIAMIN VASILIEVICH ANTONOV, 2. EVGENY DMITRIEVICH SHTEPA, 3. ALEXANDR PROKHOROVICH KRIVENKO, 4. ADEI AIDA LEONIDOVNA KURBATOVA, 5. IVAN ROMANOVICH VEDKALOV, 6. VIKTOR MIRONOVICH CHERVONENKO, 7. ANATOLY ALFONSOVICH YARMAL, 8. SEMEN ARONOVICH DONSKOI, 9. VLADIMIR ANTONOVICH KOROTKY, 10. JURY IVANOVICH ZHAVORONOV, 11. VADIM IVANOVICH GFRMANOV, 12. ALESER SERGEEVICH KORNENKO, 13. PAVEL ALESANDROVICH KADURA, 14. ANATOLY

ANDREEVICH CHVILEV, 15. EDVIN IOSIFOVICH, GAMALEI, 16. FEDOR EGOROVICH DOLZHENKOV, 17. VALENTIN ARSENTIEVICI KULICHENKO, 18. PAVEL BORISOVICH MAIKHER, 19. OLEG IVANOVICH TISCHENKO, 20. GALIA ABDULBEROVNA ATLASOVA.

Application No. 656|Cal|80 filed June 2, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

9 Claims.

A flame guniting lance comprising a watercooled casing formed of a first and second concentrically arranged pipes (1, 2) inside of which are concentrically situated a third and fourth pipe (3, 4) for supplying a powdered mixture of refractory material and fuel and for supplying oxygen the powdered mixture of a refractory material and fuel being supplied through the said fourth pipe (4) while oxygen is supplied through the annular duct between the third and fourth pipes (3, 4), said pipes (3, 4) having at the ends thereof nozzles (5, 6) for delivering the powdered mixture of the refractory material and fuel and for delivering oxygen respectively, said nozzles being arranged in pairs and coaxially in each pair in which the nozzles for delivering the powdered mixture of the refractory material and fuel are mounted on the fourth pipe (4) while the nozzles for delivering oxygen are mounted on the third pipe (3), the end of each said nozzle (5) for delivering the powdered mixture of the refractory material and fuel is situated underneath the end of each respective said nozzle (6) for delivering oxygen at a distance (L) ranging from 1 to 5 times the inside diameter (d) of said nozzle (5) for delivering the powdered mixture of the refractory material and fuel, said nozzle (5) for delivering the powdered mixture of the refractory material and fuel is provided with grooves and/or slits (7, 9, 10|13), wherein at least one of each pair of said nozzles (6) have a cross-section other than cylindrical as herein defined.

Compl. specn. 23 pages.

Drgs. 5 sheets.

CLASS : 56B & G.

153444.

Int. Cl. C10g 9,16.

A PROCESS AND APPARATUS FOR THE PRODUCTION OF LOWER OLEFINS.

Applicants : LINDE AKTIENGESELLSCHAFT, ABRAHAM-LINCOLN-STRASSE 21, D-6200 WIESBADEN, FEDERAL REPUBLIC OF GERMANY.

Inventors : 1. DR. BERNHARD LOHR, 2. DR. PETER HESSE, 3. ROBERT SCHUSTER.

Application No. 863|Cal|80 filed July 28, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

8 Claims.

A process for the production of lower olefins in a hydrocarbon cracking installation in which a cracking furnace is followed by a cracking gas cooler, said process comprising the steps of :

(a) subjecting a hydrocarbon feedstock to a cracking temperature in said furnace by heating cracking tubes in said furnace and passing said feedstock therethrough, thereby producing cracking gases containing lower olefins;

(b) passing said cracking gases through said cooler while supplying said cooler with a coolant undergoing indirect heat exchange with the cracking gases to reduce the temperature of said cracking gases, surfaces of said cracking tubes and said cooler developing carbonaceous deposits;

(c) while further heating said furnace and cooling said surfaces of said cooler with said coolant, interrupting the passage of said feedstock through said cracking installation, feeding a

gas containing oxygen and steam through said cracking tubes and at least a portion of the flow cross section of said cooler, thereby effecting substantial reduction of said carbonaceous deposits in said cracking tubes;

(d) thereafter, while continuing to heat said furnace and cool said surfaces of said cooler, increasing the mass rate of flow of said gas mixture until the temperature in said cooler increases so far carbonaceous deposits in said cooler are subjected to a watergas reaction; and

(e) continuing step (d) until carbonaceous deposits are removed from said cracking installation.

Compl. specn. 20 pages.

Drgs. 1 sheet.

CLASS : 172C1.

153445.

Int. Cl. D0g 15/00.

APPARATUS FOR RETRACTING FLATS FROM THE CAST IRON FLAT BARS OF CARDING MACHINES.

Applicants : GRAF & CIE. A.-G., OF ALTE JONAST-RASSF, 8640 RAPPERSWIL, SWITZERLAND.

Inventor : 1. STEPHAN GEISSER.

Application No. 928|Cal|80 filed August 14, 1980.

Conventional date 2nd January 1980 (80.00106) United Kingdom.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

7 Claims.

An apparatus for retracting flats from flat bars of a carding machine, comprising a supporting means for flat bars and a flat retracting wedge means operable longitudinally of said supporting means for an automatic severing of said flats from said flat bars, said flat retracting wedge means being mounted to a spindle nut means which spindle nut means is arranged on a motor driven screw spindle means and is guided thereon axially displaceable and non-rotatable.

Compl. specn. 15 pages.

Drgs. 2 sheets.

CLASS : 32F1 & 1; 55F.

153446.

Int. Cl. A01n 5/00; C07d 91/22; 91/44.

A PROCESS FOR PREPARING BENZOTIAZOLEETH-ANIMIDAMIDES.

Applicants : MONSANTO COMPANY, OF 800 NORTH LINDBERGH BOULEVARD, ST. LOUIS, MISSOURI 63166 U.S.A.

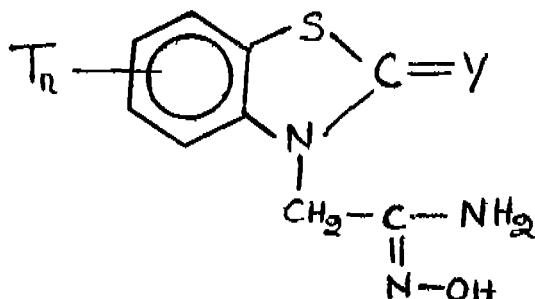
Inventors : 1. JOHN JOSEPH D' AMICO, 2. JOHN THOMAS MARVEL.

Application No. 963|Cal|80 filed August 22, 1980.

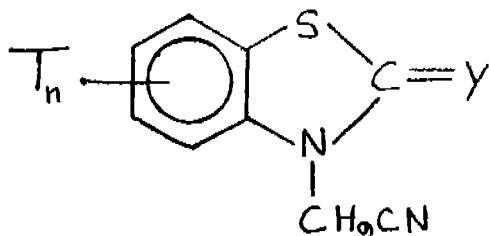
Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 1 Claim.

A process for preparing benzothiazoleethanimidamides of the formula I shown in the drawing.



wherein T is halogen or trifluoromethyl, n is 0, 1 or 2 and Y is oxygen or sulfur which comprises reacting a substituted acetone of the formula II shown in the drawing.



with hydroxylamine hydrochloride in an inert solvent medium in the presence of a base.

Compl. specn. 11 pages.

Drgs. 1 sheet.

CLASS : 62D.

153447.

Int. Cl. D02g 3/00.

## A THREAD TREATING APPARATUS.

Applicants : MASCHINENFABRIK RIETER A.G., OF WINTERTHUR, SWITZERLAND.

Inventors : 1. ARMIN WIRZ, 2. WERNER NABULON.

Application No. 1050|Cal|80 filed September 15, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 15 Claims.

A thread treating apparatus comprising a treating nozzle for treating a thread moving along a substantially predetermined thread path and means for moving the nozzle between a retracted non operative position clear of the thread path and an extended operative position in which the nozzle encloses the thread path.

Compl. specn. 26 pages.

Drgs. 3 sheets.

CLASS : 40H.

153448.

Int. Cl. B01d 53/00.

## IMPROVEMENT IN A PROCESS FOR THE SEPARATION OF GASEOUS COMPONENTS FROM A GASEOUS MIXTURE BY PHYSICAL SCRUBBING.

Applicants : LINDE AKTIENGESELLSCHAFT, ABRAHAM-LINCOLN-STRASSE 21, D-6200 WIESBADEN, FEDERAL REPUBLIC OF GERMANY.

Inventors : 1. GERHARD RANKE, 2. HORST WEISS.

Application No. 1226|Cal|80 filed October 26, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 10 Claims.

In a process for separating and obtaining as product gases at least two gaseous components from a gaseous mixture containing same by scrubbing with a physical scrubbing liquid exhibiting a higher dissolving power for at least one of the components to be separated than for at least one other of these components, wherein a first scrubbing liquid stream, loaded with all of the components to be separated, and a second scrubbing liquid stream, merely containing proportions of the less soluble component or components, are withdrawn from the scrubbing stage; a gaseous fraction is liberated by expansion of the first scrubbing liquid stream, freed of the more soluble component or components by treatment with the second, likewise expended scrubbing liquid stream and withdrawn as a first product stream; and the scrubbing liquid streams are finally subjected to a separation of the more soluble components as well as of residual proportions of the less soluble components, thus obtaining a second product gas, the improvement which comprises further expending the scrubbing liquid streams to obtain a gaseous fraction prior to the separation serving for obtaining the second product gas, recompressing the thus liberated, gaseous fraction and scrubbing the recompressed gaseous fraction with the second scrubbing liquid stream.

Compl. specn. 24 pages.

Drgs. 2 sheets.

CLASS : 194C8.

153449.

Int. Cl. H01J 15/02.

## AUTO-REVERSIBLE PHOTOOELECTROCHEMICAL STORAGE CELL.

Applicants : MPD TECHNOLOGY CORPORATION, OF 681 LAWLINS ROAD, WYCKOFF, NEW JERSEY 07481, UNITED STATES OF AMERICA.

Inventors : 1. WILLIAM DONALD KENNEDY CLARK, 2. MICHAEL NEILL HULL, 3. JOHN TAYLOR ARMS.

Application No. 1246|Cal|80 filed November 4, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 6 Claims.

An auto-reversible photooelectrochemical storage cell (as hereinbefore defined) comprising a storage electrode made from a metal or alloy capable of reversibly absorbing and desorbing hydrogen in contact with an electrolyte containing hydrogen, and an n-type photocathode.

Compl. specn. 10 pages.

Drgs. 1 sheet.

CLASS. : 24F.

153450.

Int. Cl. : F 01 L 13/00.

## ENGINE BRAKING APPARATUS OF THE GAS COMPRESSION RELEASE TYPE.

Applicants : THE JACOB MANUFACTURING COMPANY, AT 22 EAST DUDLEYTOWN ROAD, BLOOMFIELD, CONNECTICUT 06002, UNITED STATES OF AMERICA.

Inventors : 1. STANISLAV JAKUBA, 2. WALTER HARTWELL MORSE AND 3. NATHAN GUTMAN.

Application No. 1331|Cal|80 filed December 1, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 7 Claims.

Engine braking apparatus of the gas compression release type comprising an internal combustion engine having at least two exhaust valves associated with each cylinder, rocker arms associated with each cylinder, a crosshead intermediate each of said rocker arms and said exhaust valves, a hydraulically actuated reciprocating piston operable on applying hydraulic fluid pressure thereto, and means located between said piston and only one of said at least two exhaust valves for opening only one of said at least two exhaust valves on operating said piston during braking.

(Compl. Specn. 15 pages. Drgs. 4 sheets).

CLASS : 32E & 32F<sub>1</sub>

153451.

Int. Cl. C 07 C 143/00; 153/00, C 08 G 33/00.

## PROCESS FOR PRODUCING FLUORINALID CATION EXCHANGE MEMBRANE.

Applicants : ASAHI KASEI KOGYO KABUSHIKI KAISHA, OF 2-6, KOJIMA-HAMA 1-CHOME, KITA-KU, OSAKA, JAPAN.

Inventors : 1. KYOJI KIMOTO, 2. HIROTSGU MIYUCHI, 3. JUKICHI OHMURA, 4. MIKIO EBISAWA, 5. TOSHIOKI HANE.

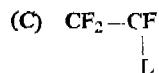
Application No. 1333|Cal|80 filed December 1, 1980.

Appropriate office for Opposition Proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

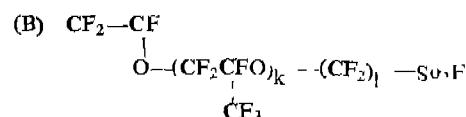
## 4 Claims.

A process for producing a fluorinated cation-exchange membrane having both carboxylic acid groups and sulfonic acid groups, said process comprises;

(1) Preparing by polymerization and molding a membrane made of a fluorinated copolymer having sulfonyl groups, said fluorinated copolymer being polymerized to consist essentially of the recurring units (C) and (B).



wherein L is F, Cl,  $\text{CF}_3$ ,  $-\text{OR}_F$  or H;  $\text{R}_F$  being  $\text{Cl}-\text{C}_2\text{H}_5$ , perfluoroalkyl.



wherein k is 0 or 1, and l is an integer of 5 to 50,

(ii) converting the terminal- $\text{CF}_2\text{I}-\text{SO}_2\text{F}$  of said recurring unit (B) into  $-(\text{CF}_2)_l-\text{SO}_2\text{X}$  by treating with a halogenation agent, preferably vapor of phosphorus pentachloride, a solution of phosphorus pentachloride dissolved in phosphorus oxychloride, an organic halide compound, or mixture of phosphorus trichloride with chlorine,

(iii) converting said  $-(\text{CF}_2)_l-\text{SO}_2\text{X}$  terminal groups of membrane into carboxylic acid groups by subjecting one surface layer of the membrane to treatment with a reducing agent selected from the group consisting of inorganic acids having reducing ability, salts thereof and hydrazine in the presence of at least one organic compound having 1 to 12 carbon atoms selected from the group consisting of alcohols, carboxylic acids, sulfonic acids, nitriles and ethers to obtain a fluorinated cation-exchange membrane having both carboxylic acid groups and sulfonic acid groups and when desired reinforcing the obtained cation exchange membrane with reinforcing materials as herein defined.

Compl. Specn. 82 pages. Drgs. 1 sheet.

CLASS : 32F<sub>1</sub> (a); 40C

153452.

Int. Cl. : B 01 F 3/00; C 07 C 65/00; 69/00.

## PROCESS FOR THE PREPARATION SURFACE-ACTIVE COMPOUNDS ON THE BASIS OF ARYLATED FATTY SUBSTANCES.

Applicants : HOECHST AKTIENGESELLSCHAFT OF D-6230 FRANKFURT AM MAIN 80, FEDERAL REPUBLIC OF GERMANY.

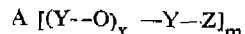
Inventors : 1. HEINZ UHRIG, 2. KLAUS EHL, 3. REINHOLD DEUBEL.

Application No. 1343|Cal|80 filed December 4, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 10 Claims.

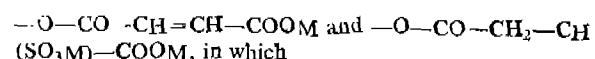
A process for the preparation of surface-active compounds of the formula



in which A is the radical of an arylated fatty alcohol, or the radical of an arylated fatty acid or esterification product thereof, X denotes integer of from 1 to 150, m is a number from 1 to 7 and Y denotes identical or different groups of the formula



Z denotes identical or different radicals of the formulae



I is a cation, which process comprises the following steps :—

(i) subjecting to alkylation aromatic hydroxy compounds such as herein described using a known Friedel Crafts' reaction agent as herein described,

(ii) the alkylation product of step (i) being then alkylated with an oxidising agent such as ethylene oxide or propylene oxide or a mixture of these two, thereafter,

(iii) when desired reacting the alkylene oxide addition product of step (ii) with maleic anhydride to obtain a corresponding maleic optionally be transformed by an alkali or alkaline earth metal sulfite or hydrogen sulfite into corresponding sulfosuccinic acid semicester.

Compl. specn. 35 pages. Drgs. Nil.

CLASS : 107D

153453.

Int. Cl. : F 02 b 61|00; 67|00.

APPARATUS FOR MOUNTING AN ACCESSORY GEAR TRAIN ON THE ENGINE BLOCK OF AN INTERNAL COMBUSTION ENGINE DESIGNED TO BE EQUIPPED WITH AN ACCESSORY GEAR TRAIN.

Applicants : CUMMINS ENGINE COMPANY, INC., AT 1000 5th STREET, COLUMBUS, INDIANA, UNITED STATES OF AMERICA.

Inventor : 1. EDWARD W. KASTING.

Application No. 1396|Cal|80 filed December 17, 1980.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

16 Claims.

Apparatus for mounting an accessory gear train on the engine block of an internal combustion engine designed to be equipped with an accessory gear train, comprising :

- (a) a gear plate;
- (b) primary shaft means for rotatably mounting a first gear in the gear train and for positioning said gear plate relative to the engine block at a fixed point along a first axis; and
- (c) secondary shaft means for rotatably mounting a second gear in the gear train and for fixedly positioning and gear plate relative to the engine block at a fixed point along a second axis.

Compl. specn. 22 pages. Drgs. 3 sheets.

CLASS : 32E

153454.

Int. Cl. : C 08 f 3|90; 15|02.

PROCESS FOR PRODUCING WATER-EXCHANGING, NON-TOXIC POLYMER MATERIAL BASED ON ACRYLAMIDE|N, N'-METHYLENE-BISACRYLAMIDE.

Applicants : ISAFLEX AG, OF SPITALSTRASSE 74, SCHLIERN, SWITZERLAND.

Inventor : 1. GOTTFRIED HELBLING.

Application No. 85|Cal|81 filed January 27, 1981.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

5 Claims.

A process for the controlled copolymerisation of acrylamide and N, N'-methylenebisacrylamide to produce water exchange, non-toxic, water insoluble polymer wherein, —acrylamide and N, N'-methylenebisacrylamide are dissolved together in water a monomer to water weight ratio of a maximum of 2 : 8, preferably 1 : 9 and wherein the ratio of acrylamide to N,N'-methylenebisacrylamide is between 9 : 1 to 99 : 1; —atleast one finely divided, suspended and/or dissolved polymerisation initiator as herein described is added, accompanied by stirring of the solution:

— copolymerisation is performed at temperatures above 50°C, and preferably between 70 to 75°C;

— the gel is granulated and is then washed with water to a maximum acrylamide monomer content of 0.1% by weight, preferably 0.05%, based on the polymer obtained;

— the gel granulate is dried at temperatures below 100°C and preferably above 95°C to a maximum water content of 12% by weight and preferably 3% by weight, based on the polymer obtained and

— the dried gel granulate is ground to the desired particle size and screened off.

Compl. specn. 12 pages. Drgs. 1 sheet.

CLASS : 107I

153455.

Int. Cl. : F 02 m 17|10; 25|00.

A FUEL SUPPLY SYSTEM FOR AN INTERNAL COMBUSTION ENGINE.

Applicants : FIAT AUTO S. p. A., OF CORSO GIOVANNI AGNELLI 200, TURIN, ITALY.

Inventor : 1. CARLO GROSSO.

Application No. 315|Cal|81 filed March 24, 1981.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

2 Claims.

A fuel supply system for an internal combustion engine comprising :

- a carburettor (1) including an air passage (2), a float chamber (5), and a fuel spray nozzle (4) disposed within said air passage (2) and connected to said float chamber (5),
- an alcohol-containing main fuel tank (7) connected to said float chamber (5),
- a fuel pump (8) in the connection of said main fuel tank (7) to said float chamber (5), and
- a gasoline-containing auxiliary fuel tank (19) connected to said carburettor (1).

characterised in that said system further comprises :

- a choke valve (9) within the air passage (2) of the carburettor, upstream of said fuel spray nozzle (4),
- a choke valve actuating mechanism (10),
- a gasoline supply diaphragm device (12), including a hollow casing (13) and a diaphragm member (14) within said hollow casing (13), which defines a first chamber (15) vented to the atmosphere, and a second chamber (17),
- a first conduit (18) connecting said second chamber (17) to said auxiliary fuel tank (19),
- a second conduit (20) connecting said second chamber (17) to said float chamber (5),
- a first and a second one-way valves (21, 22) interposed in said first and second conduits (18, 20) respectively, preventing flow of fuel from the second chamber to the auxiliary fuel tank and from the float chamber to the second chamber,
- a connection mechanism (23) connecting said choke valve actuating mechanism (10) to said diaphragm member (14) of the gasoline supply device (12); said connection mechanism (23) causing displacement of said diaphragm member (14) towards a position in which said second chamber has a minimum volume, when said choke valve (9) is in its operating position during starting and warming up of the engine.

Compl. specn. 10 pages. Drgs. 2 sheets.

CLASS : 40F  
Int. Cl. : B 01 j 1/00.

IMPROVEMENTS IN THE APPARATUS FOR DISTRIBUTING A LIQUID IN FILM-FORM ON THE INTERIOR WALLS OF VERTICAL TUBES.

Applicants : SNAMPROGETTI S.p.A., OF CORSO VENEZIA 16, MILAN, ITALY.

Inventor : L. VINCENZO LAGANA.

Application No. 607|Cal|81 filed June 5, 1981.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

(3 Claims)

An apparatus for distributing a film of a fluid over the inside surface of a tubular member, which comprises a generally cylindrical, plug-like member capable of being inserted into the mouth of a tubular member, wherein the said cylindrical member is provided with (i) a flange transverse to the cylindrical axis of the plug-like member which flange extends around at least a portion of the periphery of the member at one end thereof, (ii) a recess set into its other end which recess defines a peripheral rim around the said other end, and (iii) a plurality of helical grooves in the cylindrical wall of the member which grooves extend into the said flange, wherein the maximum depth of the grooves is less than the thickness of the rim characterised in that the cylindrical member is tapered downwards by an angle of from 1 to 2 degrees.

Compl. specn. 8 pages. Drgs. 2 sheets.

CLASS : 35F; 85J.

153457.

Int. Cl. : B 22 d 19|10; C 04 b 35|10.

METHOD OF LINING OR REPAIRING FURNACE PARTS.

Applicants : ORISSA CEMENT LIMITED, RAJGANGPUR-770017, DISTRICT SUNDARGARH, ORISSA INDIA.

Inventors : 1. DR. SHYAM LAXMAN KOLHATKAR & 2. TAPAN MUKHOPADHYAY.

Application No. 1088|Cal|81 filed September 28, 1981.

Appropriate office for Opposition Proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

5 Claims.

A method of lining furnace or repairing said lining by ramming, casting or moulding which comprises adding 3 to 20% by wt. of zircon to 97 to 80% by wt. of a mixture of high alumina materials as herein described and a plasticising clay, adding ammonium phosphate as chemical binder to the mix, adding water to the mix, and applying the wet mix to furnace lining in situ.

(Compl. Specn. 5 Pages. Drgs. Nil.)

CLASS : 39C; 40F.

153458.

Int. Cl. : B 01 d 53|22, B01 i 1|00 C 01 c 1|00.

PROCESS FOR SYNTHESIZING AMMONIA FROM HYDROGEN AND NITROGEN.

Applicants : MONSANTO COMPANY, OF 800 NORTH LINDBERGH BOULEVARD, ST. LOUIS, MISSOURI 63166, UNITED STATES OF AMERICA.

Inventors : 1. TOMMY EDWIN GRAHAM, 2. DONALD SEWIS GAGE MacLEAN.

Application No. 642|Cal|82 filed June 4, 1982.

Division of application No. 210|Cal|79 dated 6th March, 1979.

Appropriate office for Opposition Proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

19 Claims.

A process for synthesizing ammonia from hydrogen and nitrogen comprising introducing a synthesis feed gas comprising nitrogen, hydrogen and at least one of methane and argon as an inert contaminant at substantially a superatmospheric synthesis pressure into an ammonia synthesis loop, reacting hydrogen and nitrogen in the ammonia synthesis loop at a superatmospheric synthesis pressure to produce ammonia in an ammonia synthesis reaction zone, removing ammonia from the ammonia synthesis loop, and removing a purge stream from the ammonia synthesis loop, in an amount sufficient to maintain the concentration of inert contaminants less than about 25 percent wherein the purge stream is passed to a permeator comprising a separation membrane having a feed side and a permeate exit side and exhibiting selectivity to the permeability of hydrogen as compared to the permeability of each of methane and argon, a permeating gas is recovered at the permeate exit side of the separation membrane and is recycled to the ammonia synthesis reaction zone, characterized in that the permeator comprises at least two permeator stages in series, each permeator stage having a feed side and a permeate exit side in which the permeate exit side is at a lower total pressure than the total pressure on the feed side, wherein between permeator stages, the nonpermeating gas from the feed side of one permeator stage is passed to the feed side of the next permeator stage wherein at least one permeator stage has a lower ratio of total pressure on the feed side to total pressure on the permeate exit side than the ratio of total pressure on the feed side to total pressure on the permeate exit side of at least one subsequent permeator stage; and wherein the permeating gas from at least one permeator stage is recycled to the ammonia synthesis reaction zone.

(Compl. Specn. 30 pages. Drgs. 2 sheets.)

#### OPPOSITION PROCEEDINGS

An opposition has been entered by Khaitan Fans Private Limited to the grant of a patent on application No. 152351 made by The Jay Engineering Works Ltd.

#### PATENTS SEALED

151177 151501 151722 151782 151784 151792 151795 151826  
151826 151861 152006 152055 152056 152057 152058 152059  
152060 152061 152063 152066 152072 152075 152076 152077  
152085

#### AMENDMENT PROCEEDINGS UNDER SECTION 57.

(1)

Notice is hereby given that the MOBIL SOLAR ENERGY CORPORATION, formerly known as MOBIL TYCO SOLAR CORPORATION, a Corporation organised under the laws of the State of Delaware of 16, Hickory Drive, Waltham, Massachusetts, United States of America have made an application under Section 57 of the Patents Act, 1976 for effecting change in their name in application for Patent No. 23|Del|80 dated 15th January, 1980 for "System for monitoring the growth of a crystalline body of selected material from a liquid melt. The amendments are by way of change in the name of the applicants. The application for amendment and proposed amendments can be inspected free of charge at the Patent Office Branch, M. M. Building, 3rd Floor, Saraswati Marg, Karol Bagh, New Delhi-110 005 or copies of the same can be had from this office on payment of the usual copying charges.

Any person interested in opposing the application for amendment may file a notice of opposition on the prescribed form 30 within three months from the date of this notification at the Patent Office Branch, New Delhi. If written statement of opposition is not filed with the notice of opposition, it shall be left within one month from the date of filing the said notice.

## (2)

Notice is hereby given that the Mobile Tyco Solar Energy Corporation, a Corporation organised under the laws of the State of Delaware, Under States of America of 16 Hickory Drive, Waltham, Massachusetts, United States of America has made an application Under Section 57 of the Patents Act, 1970 for amendment of application form, specification and drawing sheets of their application for patent No. 53/Del/80 for "Apparatus for and method of growing crystalline body of silicon from a melt". The amendments are by way of correcting the name of the applicant company in the application form, specification and drawing sheets from "Mobil Tyco Solar Energy Corporation" to "Mobile Solar Energy Corporation". The application for amendment and proposed amendments can be inspected free of charge at Patent Office Branch, M. M. Building, Saraswati Marg, Karol Bagh, New Delhi-110005 or copies of the same can be had on payment of usual copying charges. Any person interested in opposing the application for amendment may file a notice of opposition on form 30 within 3 months from date of this notification at Patent Office Branch, New Delhi at its abovementioned address. If written statement of opposition is not filed with the notice of opposition, it should be filed within one month from date of filing of said notice of opposition.

## (3)

Notice is hereby given that Kureha Kagaku Kogyo Kabushiki Kaisha, of No. 9-11, 1 Chome, Nihonbashi Horidome-Cho, Chuo-Ku, Tokyo 103, Japan, a Japanese Company, have made an application under Section 57 of the Patents Act, 1970 for amendment of drawings of their Patent No. 149861 for "A process for producing a novel prostaglandin derivatives of a conjugate of prostaglandin steroid hormone". The amendments are by way of correction. The application for amendment and the proposed amendments can be inspected free of charge at the Patent Office, 214, Acharya Jagadish Bose Road, Calcutta-700017, or copies of the same can be had on payment of the usual copying charges. Any person

interested in opposing the application for amendment may file a notice of opposition on the prescribed form 30 within three months from the date of this notification, at the Patent Office, Calcutta. If the written statement of opposition is not filed with the notice of opposition it shall be left within one month from the date of filing the said notice.

## (4)

Notice is hereby given that Platt Saco Lowell Limited, a British Company, of Holcombe Road, Helmshore, Rossendale BB 4 4NG, Lancashire, England have made an application under section 57 of the Patents Act, 1970 for amendment application and specification of their Patent application No. 150623 for "Improvements relating to open-end spinning apparatus". The amendments are by way of changing the address. The application for amendment and the proposed amendments can be inspected free of charge at the Patent Office, 214, Acharya Jagadish Bose Road, Calcutta-17, on any working day during the usual office hours or copies of same can be had on payment of the usual copying charges. Any person interested in opposing the application for amendment may file a notice of opposition on the prescribed form 30 within three months from the date of this notification at the Patent Office, Calcutta. If the written statement of opposition is not filed with the notice of opposition, it shall be left within one month from the date of filing the said notice.

## (5)

Notice is hereby given that Yokogawa Hokushin Electric Corporation, a corporation organised under the laws of Japan and located at 9-32, Nakacho 2-chome, Musashino-Shi, Tokyo, Japan, have made an application under Section 57 of the Patents Act, 1970 for amendment of application form Title page and drawings of their application for Patent No. 151734 for "Indicating recorder". The amendments are by way of changing the name of the applicants. The application for amendment and the proposed amendments can be inspected free of charge at the Patent Office, 214, Acharya Jagadish Bose Road, Calcutta-700017 or copies of the same can be had on payment of the usual copying charges. Any person interested in opposing the application for amendment may file a notice of opposition on the prescribed form 30 within three months from the date of this notification, at the Patent Office, Calcutta. If the written statement of opposition is not filed with the notice of opposition it shall be left within one month from the date of filing the said notice.

## COMMERCIAL WORKING OF PATENTED INVENTION

The following patents in the field of Mechanical and General Engineering Industry are not being commercially worked in India as admitted by the patentees in the statements filed by them under section 146(2) of Patents Act, 1970, in respect of calendar year 1982, generally on account of want of requests for licences to work the patented inventions. Persons who are interested to work the said patents commercially may contact to patentees for the grant of a licence for the purposes.

Sr. No.	Patent No.	Date of Patent	Name & Address of Patentees	Title of the Invention
1	2	3	4	5
1.	148221	17-8-1977	mitsui toatsu chemicals inc. etc. of 2-5, 3-chome, Kasumigaseki, Chiyoda-ku, Tokyo, Japan.	Composites multi-stage pump.
2.	148224	6-1-1977	the babcock & wilcox company of 161 East 42nd Street, New York, N.Y. 10017, U.S.A.	Conduit in combination with pneumatic transport system.
3.	148233	6-3-1978	uss engineers and consultants- manufacture of ingot moulds, inc. of 600 Grant Street, Pittsburg, State of Pennsylvania, United States of America.	
4.	148253	2-7-1977	nrm corporation of 3200 Gillchrist Street, P.O. Box 6338, Akron Ohio 44312 United States of America.	Tire curing press.

1	2	3	4	5
5.	148259	13-12-1977	TESA S.A. of Rue Bugnon 38, 1020, Renens, Switzerland.	Flat segment level lever for micrometer and gauges.
6.	148264	4-4-1978	DR. C. OTTO & COM. GMBH of Christstrasse 9, 4630 Bochum, West Germany	A gas generator operating under pressure and at high temperature
7.	148277	14-12-1977	SULZER BROTHERS LIMITED of Winterthur, Switzerland.	Method and apparatus for the fabrication from sheet metal of internally weld-clapped pipe elbows.
8.	148291	27-7-1977	HIROSHI ISHIZUKA of 19-2, Ebara, 6-chome, Shinagawa-ku, Tokyo, Japan.	Apparatus for sawing stone.
9.	148294	10-10-1977	PALITEX, PROJECT-COMPANY. GMBH. of Weeserweg 8, 4150 Krefeld, West Germany.	Apparatus for the take-up and tension free re-issue of a given length of thread
10.	148316	22-8-1978	AUTOMOTIVE PRODUCTS LIMITED Tachbrook Road, Leamington Spa., Warwickshire CV 31 3ER, England.	Diaphragm spring clutches.
11.	148333	14-4-1977	I.S.C. SMELTING LIMITED of 6 st. James's square, London SW 1Y 4LD England.	Blast furnace charging apparatus.
12.	148350	18-5-1977	MANNESMAN DEMAG AKTIENESELLSCHAFT of Wolfgang-Reuter-Platz, D-4100 Duisberg, F.R.G.	Mixing bed pile apparatus with bladed pipe pick-up.
13.	148351	20-6-1977	INDIAN HEAD, INC. of 1211 Avenue of the Americas, New York-10036, U.S.A.	Improvements in or relating to a brake actuating device.
14.	148373	17-2-1978	MARIO POSNANSKY ETC. of Melchenbühlweg 18, 3006 Bern, Canton of Bern Switzerland.	Vacuum flask.
15.	148375	4-4-1978	WESTINGHOUSE ELECTRIC CORPORATION of Westinghouse Bldg., Gateway center, Pittsburgh Pennsylvania, 15222, U.S.A.	Variable capacity multiple compressor refrigeration system.
16.	148394	25-1-1977	SAUNDRES VALVE COMPANY LTD. of Cwmbran, Gwent NP 4 3XX Wales.	Method of forming an injection moulded functional lining on a valve body.
17.	148406	9-12-1977	HACOBA TEXTILMASCHINEN GMBH & CO. KG. of 5600 Wuppertal 2, Federal Republic of Germany.	Bobbins for thread-form or strip form material.
18.	148408	21-2-1978	YOUNGFLEX S.A. of 1, Rue Fries, 1701 Fribourg, Switzerland.	Cushion support element.
19.	148420	1-6-1978	STOPNIC AKTIENGESELLSCHAFT of Baarestrasse 43, 6300 Zug/Switzerland.	Sliding gate nozzles and metallurgical vessel containing such nozzles.
20.	148421	2-2-1978	USS ENGINEERS AND CONSULTANTS, INC. of 600 Grant Street, Pittsburgh, State of Pennsylvania, U.S.A.	Improved slide gate valve apparatus.
21.	148424	21-5-1975	GIRLING LIMITED of Kings Road, Tyseley Birmingham 11, England.	Improvements in vehicle brakes.
22.	148441	15-11-1977	VOEST-ALPINE AKTIENGESELLSCHAFT of A-1011 Vienna, Friedrichstrasse 4, Australia.	Swivel mechanism for belt-cutting machines.
23.	148442	20-3-1978	CONTRAVES AG. of Schafhauserstrasse 580, 8052 Zurich, Switzerland.	Solar heat collector.

1	2	3	4	5
24.	148444	21-2-1978	USS ENGINEERS AND CONSULTANTS, INC. of 600 Grant street, Pittsburgh, State of Pennsylvania, U.S.A.	Positive displacement pump for handling a suspension of particles.
25.	148472	16-2-1977	VERSON ALISTEEL PRESS, COMPANY of 8300 South Central Expressway, Dallas, Dallas county, Texas, U.S.A.	Low inertia clutch and brake system.
26.	148450	3-4-1978	TLSA S.A. of Rue Bugnon 38, 1020 Ranens Switzerland.	Interior gauge for measuring the diameter of bores of machined workpiece.
27.	148496	3-10-1977	BINISHELLS NEW SYSTEM LTD. of St. Julians Court-St. Julians avenue, St. Peter Port-Guernsey-Channel Islands, Italy.	Method and apparatus for erecting substantially dome-like building structures.
28.	148498	28-10-1977	CENTRALNY OSRODEK PROJEKTOWO-KONSTRUKCYJNY MASZYN GORNICZYCH "KOMAG" of ul. Pszcznska 37, 44-101 Gliwice, Poland.	Vibratory feeder.
29.	148504	1-5-1978	SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B.V. of carel van Bylandtlaan 30, The Hague, The Netherlands.	Process for the filtration of particles which form a compressible filter cake and simultaneous recovery of filtered liquid.
30.	148508	20-6-1978	UOP INC. at Ten UOP Plaza-Algonquin and Mt. Prospect Roads Des Plaines, Illinois, United States of America.	Channel base well screen.
31.	148511	1-4-1977	HIROSHI ISHIZUKA of 19-2-Ebara 6-chome, Shinagawa ku-Tokyo, Japan.	Apparatus for sawing stone.
32.	148514	8-6-1977	BUREAU BBR LTD. of Riesbachstrasse 57, Zurich, Switzerland.	A wedge push-in apparatus for a wire tensioning press.
33.	148540	20-1-1978	AKTIEBOLAGET MEDLJFN, of Wallingatan 37, S-111 24 Stockholm, Sweden.	Device for at least temporary occlusion of body channels.
34.	148547	1-6-1978	IMTERSTOP A.G. of Baarerstrasse 43, 6300 Zug/Switzerland.	A sliding gate nozzle for vessels used for pouring metals.
35.	148552	13-12-1979	MEREDITH JIAN RAYMOND IRWIN, of 23-31-5 Thompson street, Visakhapatnam 530001 Andhra Pradesh, India.	An improved surf landing boat.
36.	148557	22-2-1978	TESA S.A. of Rue Bugnon 38, 1020 Ranens, Switzerland.	A shock absorbing device for use in dial measuring instruments.
37.	148562	18-4-1978	BICC PUBLIC LIMITED COMPANY of Bloomsbury street, London W.C.1. B.3 Q N England.	Method and apparatus for continuously casting unfired electrodes in quantity for use in the electrolytic refining to metal.
38.	148580	28-9-1978	BRAKES INDIA LTD. of Padi, Madras-600050, India.	A brake fluid reservoir of a hydraulic braking system.
39.	148583	11-5-1977	WEAN LIMITED, INC. of 948 Fort Duquesne Boulevard Pittsburgh Pennsylvania, U.S.A.	Belt tensioning device for a vulcanizing press.
40.	148594	29-6-1977	SOCIETE INTERNATIONALE DE MECANIQUE INDUSTRIELLE S.A. of 37 rue Notre-Dame-Luxembourg.	Improvements in centrifugal pumps.
41.	148604	18-11-1977	NRM CORPORATION of 3200 Gilchrist Road, P. O. Box 6338 Akron, Ohio 44312, U.S.A.	Post cure tire inflator.
42.	148609	13-10-1977	BHARAT HEAVY ELECTRICALS LTD. of Ansal Bhawan, 18-20 Kasturba Gandhi Marg, New Delhi-110001, India.	Segmental baffle type shell and tube heat exchangers.

1	2	3	4	5
43.	148611	21-11-1977	HER MAJESTY THE QUEEN IN RIGHT OF CANADA of 101 colonel by drive ottawa, Canada.	Practice projectile adapted to be fired at supersonic velocity from a gun barrel.
44.	148612	19-12-1977	MAC GREGOR INTERNATIONAL S.A. of St. Jakobs-strasse 9, 4002 Basle, Switzerland.	Improvements in or relating to a device for refacting or extending a mobile access ramp.
45.	148617	14-12-1977	KNORR-BREMSE GMBH of Moosacher Strasse 80, 8000, Munchen 40.	Brake accelerator for compact solid-air brakes especially for rail vehicles.
46.	148622	20-4-1978	RUHRKOHLE AKTIENGESELLSCHAFT, ETC of Rellinghauser Str. 1, D-4300 Essen West Germany.	A method for taking in and taking away gases leaking during cooking and device therefor.
47.	148626	3-4-1978	DR. C. OTTO & COMP. GMBH of 463 Bochum, West Germany.	Means for supporting the battery checking of underjet coke ovens.
48.	148628	1-6-1978	DIDIER-WERK AG of Lüssingstrasse 16, 62 Wiesbaden (German Federal Republic).	Method of remelting a frozen metal plug blocking an orifice.
49.	148632	12-1-1979	BHARAT HEAVY ELECTRICALS LTD., of 18-20 Kasturba Gandhi Marg, New Delhi-110001, India.	Axial flow heat exchanger.
50.	148645	5-4-1978	TENENGE DESENVOLVIMENTO ENGENHARIA S/A ETC. of AV. Paulista, 2006-40, S/406/7 sao paulo, Brazil.	Apparatus and the method for the continuous thermal or granular or powdered solid-substance.
51.	148652	27-4-1978	WESTINGHOUSE BRAKE & SIGNAL COMPANY. of 3 John street, London WC 1N 2ES, England.	Electrical binary code producing apparatus.
52.	148667	2-8-1978	JOHN DEREK GUEST of "Iona" cannon Hill, Way, Bray, Maidenhead Berkshire, England.	Improvements in or relating to couplings for tubes.
53.	148669	24-8-1978	UNION CARBIDE CORPORATION of 270 Park avenue, New York, State of New York-10017, U.S.A.	Process and apparatus for thermochimically scarfing metal workpieces.
54.	148670	1-9-1978	BELOIT WALMSLEY LTD. of Atlas Works Bury, Lancashire England.	Improvements relating to forming machines, for paper webs.
55.	148672	12-12-1978	AHMEDABAD TEXTILE INDUSTRIES' RESEARCH ASSOCIATION of P.O. Polytechnic, Ahmedabad-380015, Gujarat, India.	A novel process and apparatus to recover steam and hot water from blow-down water of a boiler.
56.	148685	3-8-1977	HITCHINER MANUFACTURING CO., Inc. of Milford, New Hampshire, U.S.A.	A method of casting in a gas permeable shell mold and a gas permeable shell mold for carrying out the said method.
57.	148701	3-4-1976	FORGEAL SOCIETE POUR LE FORGEAGE ET 1 ESTAMPAGE DES ALLIAGES of 23 Rue Balzac Paris Be, France.	Process for manufacturing monobloc wheels by die stamping and monobloc wheels made thereby.
58.	148702	3-4-1976	-Do-	Process for manufacturing monobloc wheels by die stamping and rotary extrusion.
59.	148706	30-5-1978	SOCIETE NOUVELLE DES ECHAFAUDAGES TUBULAIRES MILLS. of 82 rue Edouard-Vaillant 93350 Le Bourget, France.	An assembly element.
60.	148709	21-10-1978	JOHNSON & JOHNSON of 501 George street, New Brunswick, New Jersey, U.S.A	A water resistant orthopedic bandage.
61.	148710	19-4-1979	PERSONAL PRODUCTS COMPANY of Milltown, New Jersey, U.S.A	Sanitary napkins.

1	2	3	4	5
62.	148725	8-7-1977	GERDA MAGNUSSON of Vogelsang 8,2409, Siersdorf, West Germany.	Method of cutting diamonds and apparatus therefor.
63.	148742	13-5-1977	WEAN UNITED, INC. of 948 Fort Duguesne Boulevard, Pittsburgh Pennsylvania, U.S.A.	Apparatus for a three or more movable platen press for producing strip like material such as belting and method for the production of a belting product therewith.
64.	148744	1-9-1977	AB CALATOR of Box 137, Ulriochamnsvagen 36, Boras Sweden.	Apparatus and method for Buttoning garments.
65.	148751	15-5-1978	ALLWARE AGENCIES LIMITED C/o Whinney Murray and Co., 57, Chiswell Street, London EC 1Y 4SY England.	Improvements in and relating to box fans.
66.	148753	19-8-1977	DUNLOP LIMITED of Dunlop House, Ryder Street, St. James's London SW1Y England.	Improvements in or relating to springs.
67.	148762	8-8-1977	USS ENGINEERS AND CONSULTANTS, INC. of 600 Grant Street, Pittsburgh, State of Pennsylvania, United States of America.	A nozzle for preventing a lumina build-up during continuous casting of aluminium-killed steel.
68.	148776	23-8-1978	WERKZEUGMASCHINEN-FABRIK ERLIKON BUEHRLE AG. of Birchstrasse 155, 8050 Zurich (Switzerland).	Three pressure control valve for an indirectly acting compressed air brake
69.	148777	23-8-1978	WERKZEUGMASCHINEN—FABRIK OERLIKON—BUEHRLE AG. OF Birchstrasse 155, 8050 Zurich (Switzerland).	Control valve for an indirectly acting compressed air brake of type used in rail vehicles.
70.	148778	28-8-1978	GIRLING LIMITED of Kings Road, Tyseley, Birmingham 11, England.	Improvements in spreading disc brakes for vehicles.
71.	148812	12-3-1979	HARIDAS GANGDAS PATEL of 3, Shreoniwas Colony, Shree Krusen Niketan Sumar Club Road, Jamnagar, Gujarat.	Door closers.
72.	148818	7-9-1978	SENTRAINSTITUTT FOR INDUSTRIELL FORSKNING of Forskningsvein 1, oslo 3, Norway.	A system for concentrating water wave energy.
73.	148823	14-9-1978	LINDAUER DORNIER G.M.B.H. of 8990 Lindau, West Germany.	Method and a loom for the production of a double pile fabric with single weft insertion.
74.	148825	20-9-1978	DOBSON PARK INDUSTRIES LTD. of Dobson Park House Colwick Industrial Estate Colwick Nottingham England N.G. 4 2 B.K.	Charge gun for hydraulic prop or jack.
75.	148836	2-6-1977	MAHLE GMBH of 26-46 Pragstrasse Stuttgart, Germany (West.)	Improvements in or relating to light metal pistons.

St. No.	Patent No.	Date of Patent	Name & Address of Patentees	Titles of the Invention
1	2	3	4	5
1.	148839	11-7-1977	DIDIER-WERKE AG of Lessingstrasse 16-18, 6200 Wiesbaden West Germany.	A refractory plate for a sliding gate nozzle apparatus. A process for making the same and a sliding gate nozzle apparatus incorporating said refractory plate.
2.	148848	9-11-1977	ROBERT HENRY ABPLANALP of 10 Hewitt avenue, Bronxville, Westchester county, New York, U.S.A.	Valve units operable to dispense liquid products and dispensers comprising the same.
3.	148866	20-4-1978	MATREX LIMITED of Bond avenue Bletchley Buckinghamshire, England.	Improvement in or relating to steel frame building.
4.	148874	24-4-1978	VICKERS LIMITED of Vickers House, Mill Bank London SW 1 P4 RA, England	A method of recovering an under water pipe and a recovering line attachment for carrying out the same.
5.	148886	28-4-1977	DR. C. OTTO & COMP. GMBH of Bochum, West Germany.	A system for handling dust-laden gases emitted from the oven chambers of a coke oven battery during the charging thereof with coal to be carbonised.
6.	148888	14-6-1977	SOCIETE' ETUDE ET DE GESTION DES BREVETS de LA ROCHE KERANDRAON ET de SAULCES de FREYCINET "S.E.G." of 68 Boulevard Melesherbes 75008 Paris, France.	Improved propelling device for ships, vessels or water craft equipped therewith.
7.	148889	17-6-1977	THOS. STOREY (ENGINEERS) LIMITED of 8 South Wharf Road, London W2 1PB England.	Prefabricated panels for bridges.
8.	148895	19-11-1977	VULCAN EQUIPMENT COMPANY LIMITED of 95 Research Road, Toronto Ontario M. 4. 2 G9 Canada.	Tire retreading machine.
9.	148897	17-12-1977	WM. R. STEWART & SONS (HACKLOMAKERS) LTD. of Marine Parade, Dundes DD1 3. JD. Scotland.	Rotary steel cutting device.
10.	148907	10-5-1978	E. J. PRICE (DEVELOPMENTS) LTD. of 71 Melchett Road, Birmingham Factory Centre, Kings Norton Birmingham, B 303 3 HL, England.	Foot pumps.
11.	148929	4-8-1978	SOCIETE DE PARIS ET DU RHONE of 36 Avenue Jean Mermoz Lyon, France.	Unidirectional drive device.
12.	148950	19-12-1977	MARTIN ENGINEERING COMPANY of Route 34 Neponset, Illinois 61345, U.S.A.	Conveyor belt cleaner blade mounting arrangement.
13.	148962	6-10-1978	NIPPON CLEAN ENGINE RESEARCH INSTITUTE CO. LTD. OF 205-3, Kilayasu-cho, Kanazawa-shi, Ishikawa-ken, Japan.	A generator blower.
14.	148965	5-12-1978	AUTOMOTIVE PRODUCTS LTD. of Tachbrook Road, Leamington Spa, Warwickshire CV 31 3ER, England,	Fluid-pressure modulating valve.
15.	148974	28-9-1979	BRAKES INDIA LIMITED of Padi, Madras-600050, Tamil Nadu, India	A self-operative device for adjusting the brake lining with respect to brake drum of a braking system.
16.	148986	3-1-1978	NADELLA of 133-137 Boulevard National 92305 Rueilmalmaison, France.	Handle bar steering head set assembly for bicycles and the like.
17.	149018	29-10-1979	LUCAS INDUSTRIES LIMITED of Great King Street, Birmingham 19, England	Fluid-level indicator.

1	2	3	4	5
18.	149019	21-8-1980	CARBOURNDUM UNIVERSAL LIMITED of 28, Rajaji Salai Madras 600 001, Tamil Nadu, India.	An improved abrasive grinding wheel and a process for manufacturing the same.
19.	149028	7-10-1977	PALITEX PROJECT COMPANY GMBH of Weeserweg B, 4150 Krefeld, West Germany.	Two-for-one double twisting machine
20.	149029	19-11-1977	VULCAN EQUIPMENT COMPANY LIMITED of 95 Research Road, Toronto, Ontario M4 G,2 G9 England.	A method of simultaneously retreading plurality of tires of one or more sizes and profiles.
21.	149038	7-6-1978	EDUARD KUSTERS of Gustav-Funders-Weg 18, 4150 Krefeld, F.R.G.	Control system for a continuously operating press.
22.	149040	25-5-1978	ETHICON INC of Somerville, New Jersey, U.S.A.	A package for multistrand surgical suture.
23.	149046	9-5-1977	UNION CARBIDE CORPORATION of 270 Park Avenue, New York, State of New York 10017, United States of America.	Method and apparatus for making an instantaneous thermochemical start.
24.	149093	4-8-1978	SOCIETE DE PARIS ET DURHONE of 36 Avenue Jean Mermoz, 69008 Lyon France.	Lower assembly for controlling the drive pinion assembly of electrical starters for internal combustion engine and electrical starters incorporating the same.
25.	149098	17-3-1979	AHMEDABAD TEXTILE INDUSTRY'S RAEESARCH ASSOCIATION of P.O. Polytechnic, Ahmedabad-380015, Gujarat, India.	An improved process for imparting flameretardancy to cellulosic fibres/fabric and/or blends with synthetic fibres.
26.	149113	1-6-1978	INTERSTOP AG. of Baarerstrasse 43, 6300 Zug/Switzerland.	Sliding closures arrangement for a discharge passage in the bottom of a casting ladle for other containers for molten metal.
27.	149137	4-11-1978	BELOIT CORPORATION of Beloit, Wisconsin 53511, U.S.A.	A paper web processing machine for coating same.
28.	149138	30-12-1977	FESTO-MASCHINENFABRIK GOTTLIEB STOLL of Ulmer Strasse 48 Esslingen, West Germany.	Fluid transfer apparatus.
29.	149150	12-7-1978	WAGNER & COMPANY of In Der Graslake 20, D-5800 Schwelm, F.R.G.	A process platen for repair of conveyor belts.
30.	149153	8-8-1978	KRAFT WERK UNION-AKTIENGESELLSCHAFT of 733 Mulheim (Ruhr) Wiesenstr. 35, F.R.G.	Steam generator.
31.	149154	10-8-1978	G.S.K. STEEL DEVELOPMENT LIMITED of Bank Buildings, High Street, Chepstow, Gwent Wales.	A rolling mill for the hot rolling of steel strip.
32.	149159	6-12-1977	E.I. DU PONT DE NEMOURS & CO. of Wilmington, Delaware, United States of America.	Low energy explosive connecting cord and cord manufacturing method and apparatus.
33.	149160	7-12-1977	MAC GREGOR INTERNATIONAL S.A. of St. Jakobs-Strasse 9, 4002 Basel, Switzerland.	Improvements in or relating to a device for opening hatch covers or the like composed of panels.
34.	149164	8-2-1978	BUHLER-MIAG G. m. b. H. of Ernst-Ammestrasse 19, 3300 Braunschweig, Federal Republic of Germany.	A decorticating device.
35.	149171	10-7-1978	JOSEPH RENE CORNELLIER OF P.O. Box 383, Station K, Montreal, Quebec, Canada.	Improved method of weaving and an apparatus for advancing a weft filament in a weaving apparatus.
36.	149172	8-8-1978	MOTEURS LEROY SOMER of Boulevard Marcellin, Leroy 16004 Angouleme, France.	Diffuser for hydro-electrical power plant and hydro-electrical power plant fitted with this diffuser

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37.	149175	4-11-1978	BELoit CORPORATION of Beloit Wisconsin 53511 United States of America.	Improvements in dryer drums for drying.
38.	149180	2-1-1978	CHICAGO PNEUMATIC TOOL COMPANY of East 44th street, New York, N. Y. U.S.A.	Hydraulic powered rock drill.
39.	149184	14-11-1979	SHROFF PILLAPPA VENKATASUBBIAH of No. 12 Thimmarayasetty Lane, Negarhpet Crosse Bangalore 560 002 Karnataka State, India	An apparatus for discharging liquid in a measured quantity.
40.	149189	13-10-1978	LAWRENCE RUDOLF SPERBERG of El Paso, Texas, United States of America	Improvements in pneumatic tyres.
41.	1491988	10-10-1977	PALITEX PROJECT-COMPANY GMBH of Weeservweg 8, 4150 Krefeld, West Germany.	Two for one twisting machine.
42.	149199	1-11-1977	TEX INNOVATIONAB of P.O. Box 5006, S-421 05 Vastra, Frolunda 5, Sweden.	Method of producing a conditioned fibrous materials with reduced tendency to wrinkle due to vacuum packaging and if desired vacuum packing the so obtained materials.
43.	149200	1-11-1977	Do.	Apparatus & method for packaging or wrapping systems.
44.	149201	8-11-1977	WINFRIED JEAN WERDING, of Grand Rue 10, 1009 Pully Switzerland.	Appliance for discharging gaseous liquid or pasty product in the form of a spray & process for its manufacture.
45.	149212	24-8-1979	INDIAN OIL CORPORATION LIMITED, of 254-C, Dr. Annie Besant Road, Prabhadevi, Bombay-400 025, Maharashtra, India.	A burners for gas stove or the like cooking & heating range and a gas stove or the like cooking & heating range incorporating the same.
46.	149226	13-9-1978	COMBUSTION ENGINEERING INC. of 1000 Prospect Hill Road, Windsor, Connecticut, U.S.A.	Improvements in gate valves for use in large size ducts having an obstruction such as an inner pipe extending therethrough.
47.	149236	16-6-1980	BRAKES INDIA LIMITED, of Padi, Madras-600 050, India.	An improved can brake.
48.	149239	10-5-1979	GIRLING LIMITED, of Kings Road, Tyscley Birmingham 11, England.	A disc brake for vehicles.
49.	149241	5-4-1980	BRAKES INDIA LTD. of Padi, Madras 600 050, INDIA.	A pedal mechanism for a hydraulic brake system.
50.	149242	31-8-1979	LUCAS INDUSTRIES LIMITED, of Great King street, Birmingham 19, England.	A servo booster assembly for vehicle braking system.
51.	149294	5-7-1979	Do.	A servo booster assembly for a vehicle braking system.
52.	149295	5-7-1979	Do.	A servo booster for a vehicle braking system.
53.	149296	5-7-1979	Do.	A servo booster assembly.
54.	149297	5-7-1979	Do.	A servo booster for a vehicle braking system.
55.	149302	23-6-1977	TERSA S.A. of Rue Bugnon 38, 1020 Renens, Switzerland.	Micrometer head for internal measurement instrument.
56.	149307	12-4-1978	ESMIL B.V. of Stations straat 48, Amersfoort, The Netherlands.	Heat exchanger.

1	2	3	4	5
57.	149324	24-8-1979	INDIAN OIL CORPORATION, of 254-C, Dr. Annie Besant Road, Prabhadevi, Bombay-400 025, Maharashtra India	A burner for gas stove or the like cooking and heating range and a gas stove or the like cooking & heating range incorporating the same.
58.	149325	28-5-1977	DUNLOP LIMITED, of Dunlop House, Ryder Street, St. James's London Sw1, England.	Improvements to tyre and wheel rim assemblies.
59.	149326	28-5-1977	Do.	Improvements in wheel rim for tubeless pneumatic tyres.
60.	149327	28-5-1977	Do.	A tyre for a tyre & wheel rim assembly.
61.	149340	5-3-1979	OSCAR PABLO PINKELSTEIN, of 14/18, Fin Rogel St., Jerusalem, Israel.	Dispenser for a material wound into a hollow cylindrical self-supporting roll.
62.	149382	22-8-1980	VELLAJAPPAN VELAYUDAM THANGA THIRUPATHY of No. 13 Sadasiva Pillai Lane, Chintadripet, Madras-600 002, Tamil Nadu, India.	A safety device for use in air or space crafts.
63.	149394	8-2-1980	LUCAS INDUSTRIES LIMITED, of Great King Street, Birmingham 19, Englishd.	A vehicle disc brake assembly.
64.	149396	17-2-1978	COMBUSTION ENGINEERING INC. of- Prospect Hill Road, Windsor, State of Connecticut, U.S.A.	An apparatus for the burning of a pulverized coal.
65.	149398	1-6-1978	STOPINC AKTIENGESELLSCHAFT of Baarerstrasse 43, 6300 zug/ Switzerland.	A sliding gate arrangement for the tap-hole of a metallurgical vessel or furnace.
66.	149406	13-2-1979	JOSEF MARTIN FEUERUNGSBAU of Leopold strasse 248, 8000 Munchen 40, F.R.G.	Grate covering for mechanically moved step-shaped furnace grates of large furnaces.
67.	149423	19-1-1978	STOCZNIA SZCZECINSKA IM. ADOLFA WARSKIE GO of ul. Hulnicaza 1, Szczecin, Poland.	Ship Hull.
68.	149425	25-5-1978	AKTIENGESELLSCHAFT KUHNLE KOPP & Kausch of Friedrich-Ebert-Str. 16, 6710, Frankelthal/Pfalz, F.R.G.	Gas turbine particularly exhaust gas super turbo charger.
69.	149426	7-11-1978	PHILLIPS PETROLEUM COMPANY, of Bartlesville, State of Oklahoma, U.S.A.	Method & apparatus for drying particulate material.
70.	149446	24-6-1978	WONTER MAURITZ, of D-5461, Kalenborn bei Linz/Rhein, West Germany.	Forehearth with weir.
71.	149461	17-1-1978	PATPAN NC. c/o. ICAZA, GONZALEZ RUIZ & ALEMAN CALLE, Aquilino De la Guardia No. 8, Panama city, Panama.	Apparatus for drying flat articles of porous material under vacuum.
72.	149462	9-6-1978	MESSIER-HISPANO-BUGATTI of 5 rue Louis Lejeune, 92120 Montrouge, France.	Wing mounted retractable aircraft undr carriage.
73.	149469	15-3-1978	ANDREA'S JAUDT, of Schon-Gauerstrasse 10C D-8900, Augsburg, West Germany.	Adjustable fluid tight packing assembly for side valve control member.
74.	149471	17-5-1978	PAUL OPPRECHT, of Im Hinteren Bernold 8962, Bergdistikon/ Switzerland.	Transport installation for can bodies for a fully automated resistance welding machine.
75.	149479	29-10-1979	LUCAS INDUSTRIES LIMITED, of Great King street, Birmingham 19, England.	A brake servo booster assembly.

Sl. No.	Patent No	Date of Patent	Name of the Patentees	Title of the Invention
1	2	3	4	5
1.	149481	25-9-1980	APPAN PARMBATH ABOOBACKER OF A.P. WATCH WORKS, Kotacherry, Kanhangad 670315 Kerala State, India.	An improved railway gate.
2.	149506	19-5-1978	THE PRESTIGE GROUP LIMITED, of Prestige House, 14-18 Holborn London EC 1N 2LQ, England.	Improvements in or relating to pressure cookers incorporating relief valve assemblies.
3.	149508	7-3-1978	SHELL OIL SOUTH AFRICA (PTY) LIMITED of Shell House Green Market square, Cape Town Cape Province, Republic of South Africa.	Mounting of solar heaters on different type of surfaces.
4.	149525	7-3-1978	Do.	Solar Water heater.
5.	149536	1-6-1978	PODERWERK GEBR. BENTELER, of 4794 Schloss Neuhaus/Kreis, Paderborn (German Federal Republic).	A controllable teeming valve for casting ladles.
6.	149572	6-7-1978	NRM CORPORATION of 3200 Gilchrist Road, P.O. BOX 6338, Akron, Ohio 44312, U.S.A.	Tire Building machine.
7.	149582	20-12-1978	NITTO BOSEKI COMPANY LTD., of 1, Aza Higashi, Gonomie, Fukushima-shi, Japan.	A glass fibre drawing assembly having an improved nozzle for use in directing bulk gas against a bushing used for the drawing of glass fibre.
8.	149598	17-5-1978	WESTINGHOUSE ELECTRIC CORPORATION of Westinghouse building Gateway centre, Pittsburgh, Pennsylvania 15222, U.S.A.	Extrudable oil-permeated lubricant wicking material and method of making same.
9.	149607	30-5-1979	THE TATA IRON & STEEL CO. LTD., of Jamshedpur, Bihar, India.	A method of and apparatus for rigidising or stiffening sheets of metals or alloys and rigidised or stiffened metal or alloys sheets.
10.	149627	30-3-1978	NRM CORPORATION of 3200 Gilchrist Road, P.O. BOX 6338, Akron, Ohio 44312, U.S.A.	Tire component transfer.
11.	149628	30-3-1978	Do.	Tire component building drum.
12.	149639	21-3-1978	DAINICHI-NIPPON CABLESLTD, of No. 8 Nishinochi, Higashimukaijima, Amagasaki-shi, Hyogo, Japan.	A curing apparatus for the production of shaped articles of crosslinked polymeric materials.
13.	149665	5-10-1978	DR. C. OTTO & COMP. GMBH of Bochum, West Germany.	A device for use with coke ovens.
14.	149669	25-1-1979	DEMAG AKTIENGESELLSCHAFT of Wolfgang, router Platz, D-4100, Duisburg, Federal Republic of Germany.	Tensioning device for tension elements on metallurgical containers especially on interchangeable converters.
15.	149684	27-3-1979	A/S N. FOSS ELECTRIC, of Slangorupgade 69 DK-3400, Hillerod, Denmark.	A dosage pump.
16.	149715	20-8-1975	USS ENGINEERS & CONSULTANTS, of 600 Grant Street, Pittsburgh, State of Pennsylvania, U.S.A.	Method and apparatus for locating improperly positioned or bent rolls.
17.	149717	19-9-1979	LUCAS INDUSTRIES LIMITED, of Great King Street, Birmingham 19, England.	Self energising spreading disc brake for vehicles.
18.	149738	27-6-1978	PROIZVODSTVENOE OBIEDNIE TURBOSTROENIYA "LENINGRADSKY METALLICHESKY ZAVOD" of Leningrad, Sverdlovskaya, Naberezhnaya 18 USSR.	Hydraulic turbine control device.
19.	149742	26-4-1978	THE FAIRFIELD ENGINEERING COMPANY of 324 Barnhart street Townships & county of Marion, State of Ohio, U.S.A.	Improvements in waste material digesters

1	2	3	4	5
20.	149758	19-2-1979	JOHNSON & JOHNSON, of 501 George New Brunswick, New Jersey, U.S.A.	Layered absorbent structure.
21.	149759	19-2-1979	JOHNSON & JOHNSON, of 501 George Street, New Brunswick, New Jersey, U.S.A	A sanitary napkin disposable diaper and catamenial tampon having a core of absorbent product.
22.	149785	24-5-1976	CLUPAK INCORPORATED, of 530 Fifth Avenue, New York, State of New York 10036, United States of America.	Nip roll for treating web material and method of manufacturing the same.
23.	149794	4-9-1980	AHMEDABAD TEXTILE INDUSTRY'S RESEARCH ASSOCIATION of P.O. Polytechnic, Ahmedabad-380015, Gujarat India.	An improved side-lever underpick mechanism for use in weaving looms.
24.	149834	19-9-1979	LUCAS INDUSTRIES LIMITED, of Great King street, Birmingham 19, England.	A disc brake assembly.
25.	149944	3-7-1978	BIOMECHANICS LIMITED, of Smarden Ashford, Kent, England.	A method of treating biodegradable waste material by anaerobic digestion and an apparatus for carrying out the said method.
26.	149952	2-1-1979	HILDA BOLLI, of 2 II Bis Avenue Charles De Gaulle 92200 Neuilly-Sur-Seine, France.	An apparatus for treating organic waste to obtain a product suitable for soil enrichment or where possible for feeding to animals.
27.	150049	20-1-1981	BRAKES INDIA LIMITED, of Padi Madras-600 050 India.	Moablock pivot for internal expanding type brake system.
28.	150081	24-6-1980	LEO BRASEEL, of im Grunon Winkel 1, D-5461, Kalenborn bei Rinz/Rhein, West Germany.	Runner gate for casting molten material.

## RENEWAL FEES PAID

121801 121926 121941 121974 121980 123932 124084 126808  
 126974 127083 131099 131645 131679 131734 131829 131831  
 131995 132366 132384 132385 132804 135476 135646 135862  
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 137246 137751 137932 137963 138893 139094 139643 139790  
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 142591 142814 143065 143140 143341 143450 143909 144269  
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 146205 146405 146640 146722 146727 146728 146804 146848  
 146860 146896 147245 147381 147715 147865 148208 148486  
 148489 148887 148889 149197 149302 149337 149347 149463  
 149465 149498 149499 149601 149984 150013 150025 150237  
 150295 150511 150696 150718 150777 150877 150905 150957  
 150987 151077 151264 151281 151425 151522 151524 151540  
 151543 151560 151676 151678 151685

## REGISTRATION OF DESIGNS

The following designs have been registered. They are not open to inspection for a period of two years from the date of registration except as provided for in Section 50 of the Designs Act, 1911.

The date shown in the each entry is the date of registration of the design included in the entry.

Class 1. No. 154040. Punjab Metals, 306, Lotus House, 33-A, New Marine Lines, Bombay-400020, Maharashtra, an Indian Sole Proprietary Firm. "Servling Bowl". 13th February, 1984.

Class 1. No. 153499. Progressive Trade Linkers, Lal Bagh, Moradabad (U.P.) an Indian Partnership Firm. "Flower Vase". 14th May, 1984.

Class 1. No. 154350. Malbros Industries, 1816, Chandni Chowk, Delhi-6, an Indian Partnership concern. The Concerto Swing Tumbler". 25th April, 1984.

Class 1. No. 153731. Jyoti Limited (an existing Company incorporated under the Companies Act) at P. O. Chemical Industries, Industrial Area, Baroda-390 003, Gujarat State, India. "A Casing". 30th November, 1983.

Class 3. No. 153999. Sunil Plastic Industries, 3-B, Udyog Nagar, Goregaon (West), Bombay-400 062, Maharashtra, an Indian Partnership Firm. "Idol". 27th January, 1984.

Class 3. No. 154135. Sunil Plastic Industries, 3-B, Udyog Nagar, Goregaon West, Bombay-400 062, State of Maharashtra, an Indian Partnership Firm. "Idol". 9th March, 1984.

Class 3. No. 154288. Edna Industries, Indian Partnership Concern 9-E, Mahim Halder Street, Calcutta-26, West Bengal. "Container". 12th April, 1984.

Class 3. No. 154377. Anjali Products, 170 Bombay Talkies Compound, Malad (West), Bombay-400 064 State of Maharashtra, India. "A Kitchen Knife Handle". 3rd May, 1984.

Class 3. No. 154215. Edna Industries, Indian Partnership Concern 9-E, Mahim Halder Street, Calcutta-700 026, West Bengal. "Container". 22nd March, 1984.

Class 3. No. 154216. Edna Industries, Indian Partnership Concern, 9-E, Mahim Halder Street, Calcutta-700 026, West Bengal. "Container". 22nd March, 1984.

Class 3. No. 154292. Apara International, An Indian Registered Partnership Firm. "Feeding Bottle". 16th April, 1984.

Class 3. No. 154019. Ashoka Plastic Industries, 12/2194-H-I, Khurana Building, Ambala Road, Saharanpur-247001, a firm registered under the Partnership Act, 1932. "Footwear Sole". 31st January, 1984.

Class 3. No. 154251. Wallfrin International 1st floor, 13/14, Bussa Industrial Estate, Near Century Bazar, Bombay-400 018, Maharashtra, an Indian Partnership Firm. "Pencil Box". 3rd April, 1984.

Class 3. No. 154340. Punjab Metals, 306, Lotus House, 33-A, New Marine Lines, Bombay-400 020, Maharashtra, an Indian Sole Proprietary Firm. "Pepper Grinder". 23rd April, 1984.

Class 3. No. 154376. Anjali Products, 170 Bombay Talkies Compound, Malad (West), Bombay-400 064 State of Maharashtra, India. "A Handle of a Cutter". 3rd May, 1984.

Class 3. No. 154290. P/f Marinplast, FR-3815 Kaldbak, Faroe Islands, (Via) Denmark, a company duly organised and existing under the laws of Denmark. "Boats". 12th April, 1984.

Class 3. No. 154291. P/f Marinplast, FR-3815 Kaldbak, Faroe Islands, (via) Denmark, a company duly organised and existing under the laws of Denmark. "Boats". 12th April, 1984.

Class 4. No. 154293. Apara International, An Indian Registered Partnership Firm. "Feeding Bottle". 16th April, 1984.

Class 10. No. 154020. Ashoka Plastic Industries, 12-2194-H-I Khurana Building, Ambala Road, Saharanpur-247 001, a firm registered under the Partnership Act, 1932. "Footwear". 31st January, 1984.

Class 12. No. 153602. Personal Products Company, a corporation organised and existing under the laws of the State of New Jersey, United States of America, of Van Liew Avenue, Milltown, N. J. 08850, United States of America. "Sanitary Napkin With Adhesive Attachment Pattern". 25th October, 1983.

SHANTI KUMAR,  
Controller General of Patents,  
Designs and Trade Marks.

